

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

a SOII
U.S.
Lawn
States
ent of
Agriculture
Forest Service
General
Technical
Report
WO-21



Timber in the United States Economy 1963, 1967, and 1972







Timber in the United States Economy 1963, 1967, and 1972

By Robert B. Phelps
Demand, Price, and Trade Analysis Group
Forest Resources Economics Research Staff
Forest Service

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402

United States Department of Agriculture
Forest Service
General Technical Report WO-21

Preface

This report presents estimates of employment and value added in timber-based activities in the United States in 1972, 1967, 1963. Also included are data on the volume of stumpage cut, the value of logs and related products harvested, the volumes of selected timber products produced, the value of shipments from timber-based primary and secondary manufacturing industries, the value of construction, freight revenues from shipments of timber products, and wholesale and retail sales of timber products.

In basic concept, organization, and most computational procedures, this study parallels an earlier one, *The Economic Importance of Timber in the United States*, published in 1963. In most respects, the data presented are comparable with those from the 1963 study. However, in some instances, lack of new information, revisions in industry definitions, or other modifications in basic data sources have necessitated slight changes in organization or compilation procedures. Such changes, however, do not significantly affect comparability between the two studies.

The information in *Timber in the United States Economy, 1963, 1967, and 1972* is a historical record of timber's contribution to the Nation's economy. When

used in conjunction with *The Economic Importance of Timber in the United States, 1954 and 1958*, it permits complete analysis covering two decades with reference points at approximately 5-year intervals.

The estimates in this report are based on data in the 1960 and 1970 *Censuses of Population*; the 1963, 1967, and 1972 *Censuses of Business*; and various other studies and surveys conducted by the Forest Service, other government agencies, and individuals. Detailed information on sources and procedures used in computing and compiling the information presented in the report is given in the footnotes to the tables and in the appendixes.

Many people have provided assistance in the planning and preparation of this report. Special acknowledgment is given to Dwight Hair, Leader of the Demand, Price, and Trade Analysis Group, Forest Resources Economics Research Staff. Keith Blatner, William Brumm, Pat Dubose, Isabel Fisk, Timothy Frink, Christine Latonich, John Maine, and Douglas Smith assisted in collecting and compiling information for this study while temporary employees of the Forest Service.

Contents

	<i>Page</i>
INTRODUCTION	1
HIGHLIGHTS	4
TIMBER MANAGEMENT	6
Timber harvest about 11.9 billion cubic feet in 1972	6
Value of stumpage cut in 1972 almost \$2.9 billion	6
Employment in timber management activities 117,200 in 1972	7
South first in timber management employment	7
HARVESTING	9
Saw logs the most important timber product harvested	9
Total value of timber products harvested in 1972 some \$6.4 billion	10
Value added in timber harvesting \$3.1 billion in 1972	10
Employment in harvesting 190,400 in 1972	10
Over half of the 1972 harvesting employment in the South	10
PRIMARY MANUFACTURING	12
Lumber, plywood, woodpulp, and paper and board the most important primary manufacturing products	12
Value of products shipped from primary manufacturing industries \$23 billion in 1972	12
Over half of shipments from pulp, paper, and paperboard mills	12
Value added in primary manufacturing industries \$10.1 billion in 1972	14
Value added attributed to timber \$8.8 billion	14
Value added attributed to timber per unit of timber input highest for pulp, paper, and paperboard mills	14
Employment in primary manufacturing industries 487,900 in 1972	15
Employment attributed to timber in primary manufacturing 426,550 in 1972	16
Average value added per employee different by industry and region	16
SECONDARY MANUFACTURING	18
Shipments from selected secondary manufacturing industries in 1972 twice those in 1963	18
Value added in selected secondary manufacturing industries \$34.0 billion in 1972	18
Value added attributed to timber in secondary manufacturing industries \$12.5 billion in 1972	18
Employment in selected secondary manufacturing industries 2.7 million in 1972	19
Employment attributed to timber in secondary manufacturing industries 900,400 in 1972	20
Average value added per employee highest in the paper and paperboard products industry	20

Contents

	<i>Page</i>
CONSTRUCTION	22
Value of construction an estimated \$159 billion in 1972	22
Value added attributed to timber in construction \$11.9 billion in 1972	22
Construction employment 5.3 million in 1972—795,250 attributed to timber	22
TRANSPORTATION AND MARKETING	24
Value added in transportation and marketing about \$194 billion in 1972	24
Value added attributed to timber in transportation and marketing \$9.3 billion in 1972	24
Employment attributed to timber in transportation and marketing 835,150 in 1972	24
Average value added per employee highest in railroad transportation, lowest in retail trade	25
CONCLUSION	26
About 4.1 percent of the Nation's GNP from timber-based economic activities	26
One of every 25 workers employed in timber-based economic activity	27
APPENDIX A. TABLES	28
APPENDIX B. INDUSTRY DEFINITIONS	78
APPENDIX C. SELECTED REFERENCES	85

List of Tables

<i>Table</i>	<i>Page</i>
1. Estimated value of product or service, total value added and employment, and value added and employment attributed to timber in timber-based economic activities in the United States, 1972, 1967, and 1963	5
A-1. Estimated volume and value of stumpage cut, value added, and value added attributed to timber in timber management in the United States, by region and State, 1972, 1967, and 1963	29
A-2. Estimated employment in timber management in the United States, by region and State, 1972, 1967, and 1963	30
A-3. Estimated volume of round timber products harvested in the United States, by major product, region and State, 1972, 1967, and 1963 ...	31
A-4. Estimated value of timber products harvested in the United States, by major product, region and State, 1972, 1967, and 1963	33
A-5. Estimated value of timber products harvested, value added, and value added attributed to timber in harvesting in the United States, by region and State, 1972, 1967, and 1963	35
A-6. Estimated employment in timber harvesting in the United States by major product and region, 1972, 1967, and 1963	36
A-7. Estimated employment in timber harvesting in the United States, by region and State, 1972, 1967, and 1963	38
A-8. Estimated production of lumber in the United States, by major species group and region, 1963-72	39
A-9. Estimated production of plywood in the United States, by major species group and region, 1963-72	40
A-10. Estimated production of woodpulp in the United States, by region, 1963-72	41
A-11. Estimated value of shipments from primary manufacturing industries in the United States, by industry and region, 1972, 1967, and 1963 ..	42

<i>Table</i>	<i>Page</i>
A-12. Estimated value of shipments from primary manufacturing industries in the United States, by region and State, 1972, 1967, and 1963	43
A-13. Estimated value added in primary manufacturing industries in the United States, by industry and region, 1972, 1967, and 1963	44
A-14. Estimated value added in primary manufacturing industries in the United States, by region and State, 1972, 1967, and 1963	45
A-15. Estimated value added attributed to timber in primary manufacturing industries in the United States, by industry and region, 1972, 1967, and 1963	46
A-16. Estimated value added attributed to timber in primary manufacturing industries in the United States, by region and State, 1972, 1967, and 1963	47
A-17. Estimated employment in primary manufacturing industries in the United States, by industry and region, 1972, 1967, and 1963	48
A-18. Estimated employment in primary manufacturing industries in the United States, by region and State 1972, 1967, and 1963	49
A-19. Estimated employment attributed to timber in primary manufacturing industries in the United States, by industry and region, 1972, 1967, and 1963	50
A-20. Estimated employment attributed to timber in primary manufacturing industries in the United States, by region and State, 1972, 1967, and 1963	51
A-21. Estimated value of shipments from selected secondary manufacturing industries in the United States, by industry and region, 1972, 1967, and 1963	52
A-22. Estimated value of shipments from selected secondary manufacturing industries in the United States, by region and State, 1972, 1967, and 1963	53
A-23. Estimated value added in selected secondary manufacturing industries in the United States, by industry and region, 1972, 1967, and 1963	54

<i>Table</i>	<i>Page</i>
A-24. Estimated value added in selected secondary manufacturing industries in the United States, by region and State, 1972, 1967, and 1963	55
A-25. Estimated value added attributed to timber in secondary manufacturing industries in the United States, by industry and region, 1972, 1967, and 1963	56
A-26. Estimated value added attributed to timber in secondary manufacturing industries in the United States, by region and State, 1972, 1967, and 1963	57
A-27. Estimated employment in selected secondary manufacturing industries in the United States, by industry and region, 1972, 1967, and 1963	58
A-28. Estimated employment in selected secondary manufacturing industries in the United States, by region and State, 1972, 1967, and 1963	59
A-29. Estimated employment attributed to timber in secondary manufacturing industries in the United States, by industry and region, 1972, 1967, and 1963	60
A-30. Estimated employment attributed to timber in secondary manufacturing industries in the United States, by region and State, 1972, 1967, and 1963	61
A-31. Value of new construction put in place in the United States, by type, 1963-72	62
A-32. Housing starts in the United States, by region, 1963-72	63
A-33. Estimated value added and value added attributed to timber in construction in the United States, by region and State, 1972, 1967, and 1963	64
A-34. Estimated employment and employment attributed to timber in construction in the United States, by region and State, 1972, 1967, and 1963	65
A-35. Estimated value added and value added attributed to timber in transportation and marketing in the United States, by region and State, 1972, 1967, and 1963	66

<i>Table</i>	<i>Page</i>
A-36. Estimated value added and value added attributed to timber in transportation in the United States, by industry and region, 1972, 1967, 1963	68
A-37. Estimated value added and value added attributed to timber in marketing in the United States, by industry and region, 1972, 1967, and 1963	69
A-38. Estimated employment and employment attributed to timber in transportation and marketing in the United States, by region and State, 1972, 1967, and 1963	70
A-39. Estimated employment and employment attributed to timber in transportation in the United States, by industry and region, 1972, 1967, and 1963	72
A-40. Estimated employment and employment attributed to timber in marketing in the United States, by industry and region, 1972, 1967, and 1963	73
A-41. Estimated value added in timber-based economic activities in the United States, by industry and region, 1972, 1967, and 1963	74
A-42. Estimated value added in timber-based economic activities in the United States, by region and State, 1972, 1967, and 1963	75
A-43. Estimated employment in timber-based economic activities in the United States, by industry and region, 1972, 1967, and 1963	76
A-44. Estimated employment in timber-based economic activities in the United States, by region and State, 1972, 1967, and 1963	77
B-1. Types of firms included in the major primary and secondary industries, 1972, 1967, and 1963	84

Introduction

Timber is only one of the important products and services that the Nation derives from its forests. Forests also provide such products as minerals, wildlife, fish, water, and forage, and such diverse services as outdoor recreation opportunities and wilderness experiences. Although all of these various products and services are vital to the quality of life and national well-being, timber is the major consumable product of the forest and the primary source of forest revenues. It is also one of the Nation's most important industrial raw materials, manufactured into and consumed in many forms for many purposes ranging from housing, furniture, and toys to paper, Christmas trees, and fuelwood.

Because of its widespread use, timber is an important contributor to the U.S. economy. In 1958, about 5.6 percent, or about \$1 of every \$18, of the Nation's gross national product (GNP)—the value at current market prices of all goods and services produced by the Nation's economy—originated in some kind of timber-based economic activity. Employment attributed to timber amounted to the equivalent of 3.3 million people or about 1 out of every 20 persons employed.

Since the 1950's, there have been many changes in the management, harvest, manufacture, distribution, and use of timber and its products. Productivity has im-

proved in all phases of the timber-based economy for which data are available, new products have been developed, the relative importance of the older products has shifted, industrial production processes have been modified, methods and means of transportation have been altered, relative price relationships between timber and nontimber products have changed, and production and consumption of nearly all timber products have increased. Because of these various factors, timber's role in the Nation's economy has changed. This study was designed to measure this change by estimating timber's contribution to national, regional, and State economic activity in 1963, 1967, and 1972. The regions used in the study are the same as those used for most Bureau of the Census Surveys and are shown in figure 1.

Gross national product and total national employment are two of the most widely accepted measures of national economic activity. Both of these national measures are the sums of the contributions of the various industries and other economic enterprises across the Nation. As a consequence, the amounts of GNP and employment originating in timber-based economic activities should provide a meaningful estimate of the total economic importance of timber.

Figure 1

Study Regions



For purposes of this study, and to facilitate comparisons with earlier studies, timber-based economic activities have been categorized as follows:

1. *Timber management.*—Activities involved in improving, protecting, and otherwise managing forest lands for the production of timber and related products.
2. *Harvesting.*—Activities involved in harvesting and transporting logs and related products from forests to local points of delivery.
3. *Primary manufacturing.*—Activities involved in the processing of logs and related products into lumber, veneer, plywood, pulp and paper, turpentine, rosin, and other products.
4. *Secondary manufacturing.*—Activities involved in the remanufacture of lumber, plywood, paper, and other products into finished goods such as furniture, toys, wearing apparel, and containers.
5. *Construction.*—Activities involved in the fabrication of lumber, plywood, and wood-based building board into houses, nonresidential buildings, and other fixed structures.
6. *Transportation and marketing.*—Activities involved in the transportation of logs and related products from local delivery points to manufacturing plants or other consumers, transportation of primary and secondary products from points of manufacture to final consumers, and the marketing of these products through wholesale and retail channels.

In order to estimate the contribution of each of these activities to total GNP, the economic concept of value added was used. Value added is defined as the difference between the value of goods produced by an enterprise and the costs of materials and supplies that are used in producing them. It represents the amount available for wages and salaries of workers, interest, rent, profits, taxes, dividends, and depreciation expenses. The sum of the values added by all of the enterprises in any particular sector of the economy is equal to that sector's contribution to GNP, the sum of values added in all sectors being equal to total GNP.

In timber management and harvesting, as defined in this report, all of the values added and employment were considered to be timber based and thus were attributed to timber. In those enterprises engaged in manufacturing, construction, transportation, and trade, where both

timber- and nontimber-based materials were used or handled, only a portion of the total value added and employment were attributed to timber. For these enterprises, estimates of total value added and employment and of value added and employment attributed to timber are presented. The sum of the values added and employment attributed to timber is considered to represent that part of the GNP and national employment originating in timber-based economic activities.

As shown in the table footnotes, data on value added and employment for the manufacturing industries were derived from the 1963, 1967, and 1972 *Censuses of Manufactures*. For these industries, it was assumed that estimates of value added and employment attributed to timber could be derived by using the ratios between the cost of timber products as a raw material and the total cost of all raw materials that were incorporated into the final product. For example, in the wood household furniture industry—where lumber, plywood, particleboard, veneer, and other wood-based products composed about 60 percent of the total cost of materials used in 1972—60 percent of the total value added and employment was attributed to timber. The remaining 40 percent was attributed to glass, plastics, metals, textiles, and other non-wood materials used in making the final products. In contrast, only about 5 percent of the value added and employment in metal household furniture was attributed to timber and 95 percent to other materials.

In some secondary manufacturing industries, allowances were made for nontimber raw materials used in earlier processing stages. For example, only 85 percent of the cost of the paper and paperboard consumed was used in the allocation of value added and employment. The remaining 15 percent of the cost of the paper and board input was considered to be allocatable to straw, cotton, bagasse, clay, or other nontimber raw materials used in paper and paperboard manufacture in the earlier processing stages.

In some manufacturing industries, detailed information on value of materials consumed was not available. In those cases, estimates of value added and employment attributed to timber were based on value or quantity of goods produced. For example, in the women's and misses' dresses industry, where an estimated 15 percent of the dresses produced were chiefly from rayon or acetate, 15 percent of the value added and employment were attributed to timber.

The estimates of value added and employment attributed to timber were computed for all primary and secondary manufacturing industries where timber products represented more than 2.5 percent of the total cost of materials used or handled. In numerous other manufacturing industries, where cost of timber products consumed was less than 2.5 percent, no separate industry

estimates of value added or employment were computed, nor was an attempt made to show total value of product shipments. However, estimates of the aggregate value added and employment attributed to timber in such industries were made. These were based on estimated volumes of timber-based materials consumed in these industries and on the ratios of value added and employment attributed to timber per unit of wood consumed in those secondary manufacturing industries in which timber composed more than 2.5 percent of materials cost.

Estimates of value added and employment attributed to timber in construction were derived by multiplying estimates of total value added and employment by the ratios of cost of timber products construction materials to cost of total materials by type of construction. For the transportation and trade sectors, estimates of value added and employment attributed to timber were derived by multiplying estimates of total value added and employment by the ratio of freight revenue from timber products and total freight revenue, and sales of timber products and total sales, respectively.

Although this study measures some of the same factors (value added and employment) measured in input-output studies and used in the construction of input-output tables, it is not an input-output study. As a consequence, no interindustry transactions matrix has been constructed and it is not possible to measure, for example, the effects on the timber-based sectors of a change in final demand through the use of multiplier analysis. In addition, interstate, interregional, and international flows of mate-

rials between sectors have not been estimated. Thus, although the statement can be correctly made that for every dollar of stumpage cut in a State, or region, an additional X dollars of value is added in other timber-based economic activities, it should not be implied that the additional value added has been generated by timber from that State or region.

The data used in this study have been derived from a great number of diverse sources. In some cases, it was necessary to make estimates for States based on regional averages, or for regions based on national data. Consequently, the more aggregative data are likely to be the most reliable. In others, such as for management and harvesting, the Standard Industrial Classification scheme for establishments was departed from in favor of a more activity-oriented approach. This required modifications in the primary manufacturing data derived from the *Censuses of Manufactures*, partly on a judgmental basis, as discussed in the primary manufacturing section. It was also necessary, for some items, to make estimates based on trends when data for 1963, 1967, or 1972 were not available. Finally, because the Nation's economic system is dynamic and changes from year-to-year, some apparent trends shown by the data may be the result of temporary changes in the overall economy rather than structural changes in the timber economy. Despite these limitations, it is believed that the estimates presented in the report will provide a more complete understanding of the importance of timber and timber-based activities in the Nation's economy.

Highlights

The estimated stumpage value of the timber cut in the United States in 1972 was about \$2.9 billion (table 1), more than double the estimated \$1.3 billion harvest in 1963. The timber products harvested from this stumpage, along with related products such as Christmas trees and pine gum, were valued at \$6.4 billion. In total, about 307,000 were employed in timber management and harvesting in 1972.

The net contribution to the GNP of the enterprises included in this study is shown in terms of value added—the difference between the costs of goods purchased by an enterprise and value of products sold. All of the values added and employment in timber management and in harvesting were considered to be timber-based and thus were attributed to timber. However, in those enterprises in manufacturing, construction, transportation, and trade, where both timber and nontimber materials were used or handled, only a part of the total value added and employment originated in timber-based activities and was attributed to timber.

The value of shipments from primary manufacturing industries (sawmills and planing mills; veneer and plywood plants; pulp, paper and paperboard mills; and other primary manufacturing plants such as cooperage-stock mills and particleboard plants) amounted to \$23 billion in 1972. Value added in primary manufacturing amounted to \$10.1 billion and that attributed to timber to \$8.8 billion. Total employment in primary manufacturing was 488,000. Of that total, 427,000 was attributed to timber.

Shipments from selected secondary manufacturing industries (paper and paperboard products, furniture, millwork and prefabricated wood products, and wooden containers industries) totaled \$35.5 billion. The value added attributed to timber in these industries amounted to \$12.5 billion in 1972. Employment attributed to timber totaled 900,000.

In construction, the total value of products produced (as measured by construction expenditures) was about \$159 billion. Total value added amounted to \$79.6 billion and that attributed to timber \$11.9 billion. Employment in construction was an estimated 5.3 million, with some 795,000 attributed to timber.

The total value added in transportation and marketing was an estimated \$194.2 billion. About \$9.3 billion of this was attributed to timber. Total employment was 18.7 million, that portion attributed to timber about 835,000.

Overall, the value added in all types of timber-based economic activities was almost \$48.5 billion in 1972, or about 4.1 percent of the Nation's GNP. Employment attributed to timber in 1972 was about 3.3 million, or about 4.0 percent of all civilian employment in the United States. In 1963, about 4.4 percent of the GNP and 4.5 percent of total employment were estimated to be timber-based.

Table 1.—Estimated value of product or service, total value added and employment, and value added and employment attributed to timber in timber-based economic activities in the United States, 1972, 1967, and 1963

Economic activity	1972			1967			1963		
	Value added		Employment	Value added		Employment	Value added		Employment
	Total	Attributed to timber	Total	Total	Attributed to timber	Total	Total	Attributed to timber	Total
	Million dollars	Million dollars	Thousand employees	Million dollars	Million dollars	Thousand employees	Million dollars	Million dollars	Thousand employees
Timber management	2,864	2,864	117	1,470	1,470	108	1,336	1,336	95
Harvesting	6,360	3,065	190	3,540	1,762	236	3,220	1,533	277
Primary manufacturing:									
Sawmills and planing mills	7,575	3,029	2,876	184	171	4,177	1,526	1,449	178
Veneer and plywood plants	2,923	1,238	1,073	66	58	1,687	649	584	70
Pulp, paper, and paperboard mills	11,705	5,417	4,583	218	184	8,823	4,341	3,454	230
All other	815	384	264	20	14	334	151	141	13
Total	23,018	10,069	8,797	488	427	15,021	6,666	5,629	502
Secondary manufacturing:									
Millwork and prefabricated wood products	8,085	3,127	1,931	219	137	3,291	1,245	779	125
Wooden containers	774	359	324	37	33	530	239	197	31
Furniture	10,111	5,395	1,820	423	151	6,890	3,658	3,755	387
Paper and paperboard products	16,553	7,605	5,063	413	278	12,147	5,374	3,626	276
Fibers, plastics, and textiles	—	17,513	2,639	1,652	249	15,403	2,189	1,788	254
All other	—	—	718	—	52	—	600	—	63
Total	—	—	12,504	—	900	—	—	8,766	—
Construction	159,000	79,601	11,947	5,278	795	102,400	49,970	6,733	4,532
Transportation and marketing:									
Transportation	—	32,070	2,792	1,899	165	—	21,233	1,835	1,849
Wholesale trade	684,300	70,466	2,997	4,310	181	459,500	44,037	1,761	1,777
Retail trade	470,800	91,635	3,561	12,498	489	310,200	61,624	2,813	11,005
Total	—	194,171	9,287	18,707	835	—	126,894	6,409	16,495
Total, All types	—	—	48,464	—	3,265	—	—	30,768	—
								3,024	—

¹ Value of product or service: timber management—value of stumpage cut; harvesting—value of timber products harvested; primary and secondary manufacturing industries—value of shipments; construction—total construction value including new and estimated maintenance and repair, wholesale and retail trade—total sales.

² Not available.

Timber Management

For purposes of this study, timber management is defined as the process of improving, protecting, and otherwise managing forest lands for the production of timber and related products. It includes such activities as timber stand improvement; tree planting; protection of forests from fire, insects, and other destructive agents; timber sales activities; and education, consultation, planning, and research related to timber management and timber products.

Timber management activities have grown rapidly during the past few decades as public resource agencies and timber industries have expanded and intensified their programs. In addition, through various public and private educational and technical assistance programs, nearly all landowners have been afforded the opportunity to manage their timber resources more effectively. Moreover, nearly all U.S. commercial timberland is now protected against wildfires by some type of organized fire control program. As a result of these various measures, most of the timber currently harvested in the United States represents to some degree the product of management.

Timber harvest about 11.9 billion cubic feet in 1972

In 1972, some 11.9 billion cubic feet of timber was harvested from U.S. forests (table A-1, fig. 2). This represented an increase of about 12 percent from production in 1963, and 7 percent more than in 1967.

About 47 percent of the total cut (5.6 billion cubic feet) came from forests in the South, 40 percent (4.7 billion cubic feet) from the West, and 13 percent (1.5 billion cubic feet) from the North. For the South, the cut in 1972 represented a large increase since 1963, both in volume and proportion of the U.S. total. The volume cut rose nearly 1.2 billion cubic feet, and the proportion of total increased by some 5 percent. The volume harvested in the West also increased, rising almost 0.4 billion cubic feet. However, the amount cut in 1972 represented a somewhat smaller percentage of the U.S. total than did the 1963 harvest. The North showed a decline in both volume and proportion of total cut.

Oregon topped all the other States in total volume cut in 1972, followed closely by Washington, also in the Pacific region. These two States held the same relative positions in 1963 as well. California was the third largest producer in both years. The volume of timber cut in Alabama was largest for any State outside the Pacific Region in 1972. The Georgia harvest was next largest in the South. This was a reversal of the situation in 1963 when Georgia led the South and Alabama was second. Among the Northern States, the largest volume was cut in Maine in both 1972 and 1963.

The volume of, regional distribution of, and trends in timber harvests are due to a number of complex interacting demand and supply factors. For example, demand for hardwood timber, over half of which was growing in northern forests in the late 1960's, has declined somewhat over the past three decades. Conversely, markets for softwood timber, largely a product of western and southern forests, have increased. Timber size, timber quality, ownership patterns, and industry and market locations have also been important. Continued shifts can be expected as the relative importance of these various factors change.

Value of stumpage cut in 1972 almost \$2.9 billion

The stumpage value of the timber cut from U.S. forests in 1972 is estimated at about \$2.9 billion—more than double the value in 1963 and 95 percent above 1967 (table A-1, fig. 2). This sharp increase in total value was the result of not only the rise in volume harvested but also an even larger jump in average value. As shown in the tabulation below, average value per hundred cubic feet for all stumpage cut was about \$24.10 in 1972, more than 90 percent above the 1963 average.

Region	Average value of stumpage cut		
	1972	1967	1963
	(dollars per 100 cubic feet)		
North	11.72	8.14	7.52
South	17.07	10.48	9.33
West	36.48	18.49	18.05
United States	24.10	13.24	12.64

Although the total value of stumpage cut increased in the North, South, and West between 1963 and 1972, the percentage contribution of each to the national total changed markedly. For example, the West, which accounted for about 51 percent of the total in 1963, jumped to over 60 percent in 1972. In contrast, the South dropped from 35 to 31 percent, despite large increases in both volume and value. The North experienced a decline to 7 percent. These changes in relative share are due to the various factors outlined above and to the differences in timber species and quality between the regions. Much of the timber harvested in the Pacific Coast States was old-growth softwood sawtimber, high in demand for manufacture into plywood and lumber, principally for housing and other construction purposes. On the other hand, much of the timber cut in the East was from relatively young forests and was, with some exceptions, of a

somewhat smaller size and lower quality. As a result of these factors, average stumpage price in the West doubled between 1963 and 1972, southern prices increased about 83 percent, and prices in the North rose 56 percent (see tabulation above). Most of the rise in all regions came between 1967 and 1972.

In this study, it has been assumed that the value of stumpage cut is the same as the total value added and the value added attributed to timber management activities. There are undoubtedly some costs for intermediate products used in timber management, such as supplies used in planting and fire control that conceptually should be deducted. However, much of the activity involved is labor intensive, and the data available indicate that the intermediate product costs are relatively small in comparison with the value of stumpage cut. Consequently, no deductions were made.¹

Employment in timber management activities 117,200 in 1972

The equivalent of about 117,200 people is estimated to have been employed in timber management activities in 1972 (table A-2). This total includes estimates of the

¹ Hair, Dwight. The economic importance of timber in the United States. U.S. Dep. Agric. For. Serv. Misc. Publ. 941, 91 p. 1963.

full-time equivalent for part-time employees and timberland owners. Although no exact number is available, it is estimated that about 20,000, or 17 percent of the total, were professional foresters. The remaining employment, including that of forest owners, involved a variety of tasks such as firefighting, tree planting, and planning sales and other management activities.

Employment in timber management is estimated to have increased about 24 percent—the equivalent of 22,500 workers—between 1963 and 1972. The largest part of this rise, about 13,000, came between 1963 and 1967, and involved increases in both government and private employment. Between 1967 and 1972, some slowing occurred, particularly in Federal employment.

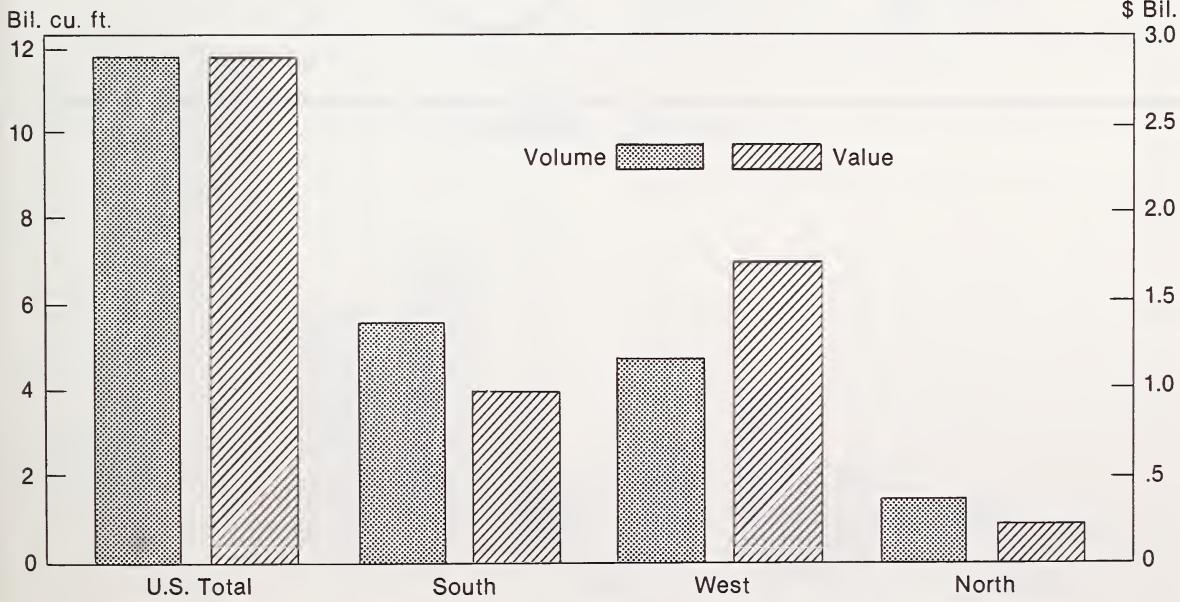
In all 3 study years, about 60 percent of the total employment is estimated to have been in or funded by Federal, State, and local government agencies and about 13 percent in forest products industries.

South first in timber management employment

In 1972, as well as 1963 and 1967, about a fourth of the total employment was in the North, a third in the West, and the remaining two-fifths in the South (fig. 3). Employment by the Federal government was highest in the West and timber-owner employment highest in the East, because of existing land-ownership patterns.

Figure 2

Volume and Value of Stumpage Cut, 1972

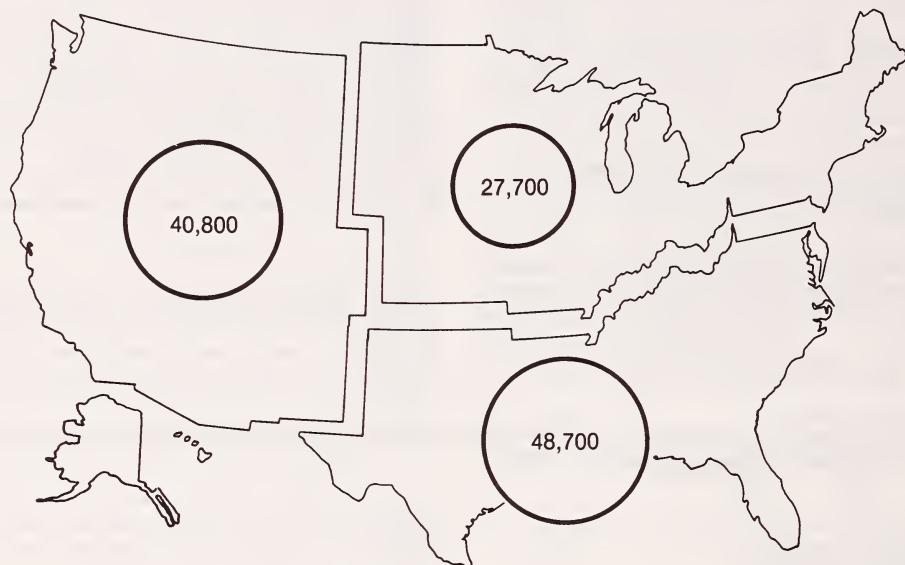


In so far as possible, estimates of employment in timber management were based only on those involved in activities directly related to the growing of trees for timber. However, timber management activities include many functions other than those directly related to the production of timber and to timber sales. The data

presented here undoubtedly include some employment that might better be attributed to wildlife, water, range, or some other forestry activity, related but not directly attributable to timber production. As in the case of stumpage, all of the employment in timber management activities is attributed to timber.

Figure 3

**Employment in Timber Management, 1972
(Total 117,200)**



Harvesting

In this study, harvesting includes felling trees, cutting them into logs, cutting or collecting such miscellaneous timber products as Christmas trees and pine gum, and transporting these products to local delivery points such as rail yards, barge landings, and processing points.

Saw logs the most important product harvested

In 1972, about 5.9 billion cubic feet of saw logs, 3.6 billion cubic feet of pulpwood, 1.4 billion cubic feet of veneer logs, and 0.95 billion cubic feet of other round timber products such as cooperage logs, poles, piling, fuelwood, and fence posts were harvested from U.S. forests (table A-3, fig. 4). This represented an increase since 1963 of about 9 percent for saw logs, 52 percent for veneer logs, and 36 percent for pulpwood. Only the harvest of "other" timber products dropped during the period, mainly because of the continued decline in fuelwood output.

The South accounted for about 47 percent of the total roundwood harvest in 1972. This was up sharply from 42 percent in 1963 and was due to large increases in pulpwood and veneer log output and to a somewhat smaller rise in saw log production. Much of the over fourfold increase in veneer log production resulted from the rapid development of the southern pine plywood industry.

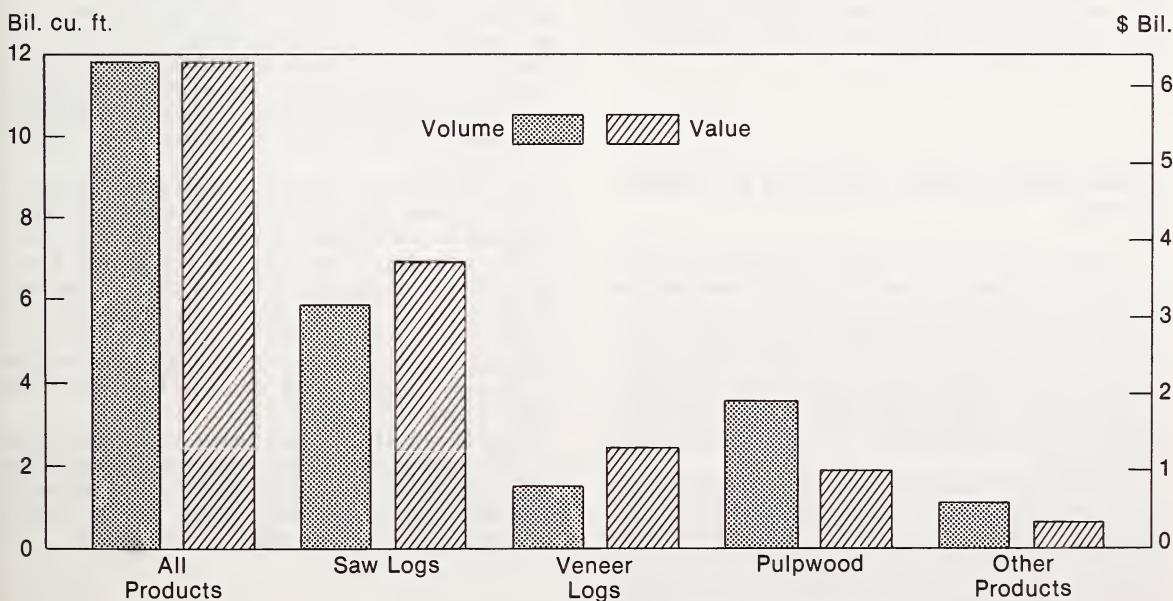
About 72 percent of the total pulpwood harvest came from Southern forests in 1972, a somewhat larger proportion than in 1963. Over half of the "other" roundwood products also was cut in the South.

About 4.7 billion cubic feet of roundwood products was harvested in the West in 1972, some 40 percent of the national total and slightly below the 41 percent produced in 1963. The West produced the largest volume of saw logs in all 3 study years. Most of these were harvested in the Pacific Coast States of Oregon, Washington, and California. Output in the North dropped about 12 percent between 1963 and 1972, primarily as a result of declines in the harvests of veneer logs and "other" products. In total, about 13 percent of the Nation's roundwood output came from the North in 1972, somewhat less than the 16 percent produced in 1963.

Oregon, Washington, and California led all States in the harvest of both saw logs and veneer logs in 1963 and 1967. By 1972, however, with the emergence of the softwood plywood industry in the South, Louisiana became the third leading veneer log producer. Alabama was the number one total producer of all roundwood products outside the Pacific region in 1972. Maine led the North in saw log, veneer log, and pulpwood output, and Missouri had the largest volume of "other" products.

Figure 4

Volume and Value of Round Timber Products Harvested, 1972



The total value of round timber products harvested in 1972 is estimated at \$6.3 billion (fig. 4) about 98.6 percent of the value of all products discussed in the following section.

Total value of timber products harvested in 1972 some \$6.4 billion

The total value of timber and related products harvested from U.S. forests in 1972 was an estimated \$6.4 billion (table A-4.) This was almost double the estimated value in 1963 and 80 percent larger than in 1967. The somewhat larger increase in total value than in timber products output during the study period was due to the rapid rise in average value for most products, particularly between 1967 and 1972.

In 1972, saw logs accounted for about 58 percent of the total value of the timber products harvested; veneer logs 21 percent; pulpwood 16 percent; and the "other" products such as fuelwood, poles, piling, pine gum and Christmas trees, the remaining 5 percent. This was somewhat different from the distribution in 1967 and 1963, when the total value of pulpwood harvested exceeded total veneer log value.

The West, which led all other sections of the Nation in total value of timber products harvested in each of the 3 study years, increased its share of the total from 52 to 55 percent between 1963 and 1972. This was primarily due to the relatively more rapid increase in average saw log and veneer log value for Pacific Coast species. The South was next in order of importance.

Value added in timber harvesting \$3.1 billion in 1972

The total value of the timber and related products harvested represents, in part, the costs of stumpage and of the intermediate products used in harvesting and transportation to local points of delivery. When these costs are deducted from the total value of timber products harvested, the value added in harvesting (and the value added attributed to timber) amounted to an estimated \$3.1 billion in 1972, double the \$1.5 billion added in 1963 (table A-5).

In 1972, about 55 percent of the total value added (also value added attributed to timber) was in the West, 36 percent in the South, and 9 percent in the North. This was somewhat different from the distribution of the value of timber products harvested, in part because of regional differences in logging methods and average wage rates.

Employment in harvesting 190,400 in 1972

In 1972, the equivalent of 190,400 people were employed in timber harvesting activities (table A-6, fig. 5). This was a decline of more than 86,000 from total employment in 1963 and was primarily due to continuing improvements in logging productivity across the Nation as well as declines in some of the more labor intensive activities such as pine gum gathering.

The estimates of logging employment presented here are substantially larger than estimated employment in the Logging Camps and Logging Contractors Industry (SIC 2411) shown in the 1963, 1967, and 1972 *Censuses of Manufactures*. This is because of differences in definitions and coverage. The Census estimates included only the employees of independent loggers and contractors and excluded the logging employees of primary manufacturing enterprises such as sawmills and pulpmills, farmers and other part-time loggers, and workers engaged in harvesting such miscellaneous products as pine gum. The estimates presented here, on the other hand, were derived by using timber products output data and estimated regional productivity factors and therefore include all harvesting employment.

Over half of the 1972 harvesting employment in the South

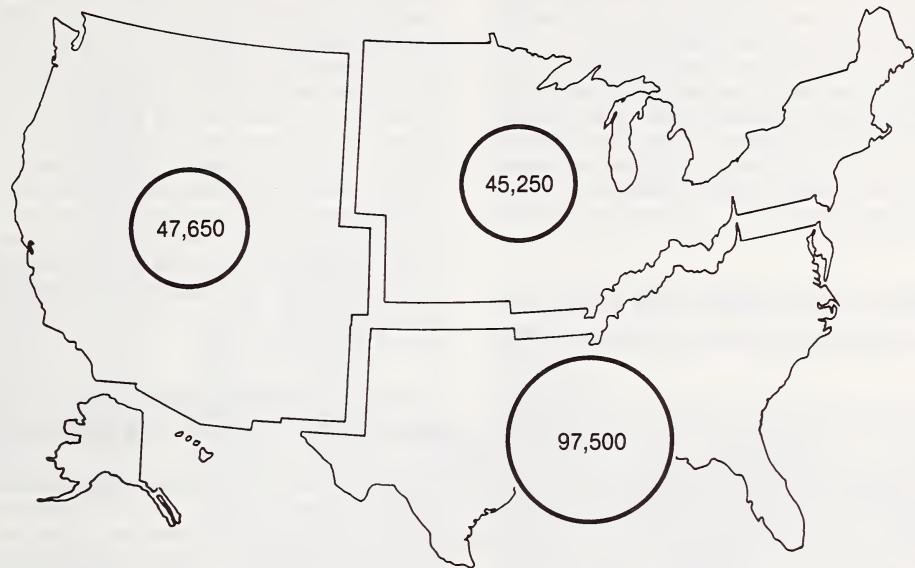
About 51 percent of the 190,400 people engaged in harvesting in 1972 were employed in the South, mostly in the production of pulpwood (tables A-6, and A-7). Another 25 percent of those employed in harvesting were in the West and were largely engaged in saw log production. Pulpwood production was also the most important harvesting activity in the North, followed closely by saw log harvesting.

The distribution of harvesting employment among the regions reflected both the volume and types of products harvested and the differences in labor productivity. Productivity as measured by output per person-year of employment was estimated to be much larger in the West than in the South or North. Harvesting of most products in the West tended to be more efficient because of the relatively larger scale of most operations and the fact that much of the logging was in stands of larger trees with higher average volumes per acre.

Oregon, with about 17,000 people employed in 1972, was the leading State in harvesting employment (table A-7). Georgia was the second ranked State, followed by Alabama, both in the South. Maine was the leading northern State in total harvesting employment.

Figure 5

Employment in Timber Harvesting, 1972
(Total 190,400)



Primary Manufacturing

Some of the products harvested from the Nation's forests, such as fuelwood and Christmas trees, are ready for use and need only be marketed or transported to the final consumer. However, most, such as saw logs, veneer logs, and pulpwood, are manufactured into lumber, plywood, wood pulp, and other similar items.

This primary manufacturing is carried out in a group of enterprises that have been classified in this study as the sawmills and planing mills industry; the veneer and plywood industry; the pulp, paper and paperboard industry; and "all other"—a grouping of various enterprises manufacturing such diverse timber products as excelsior, wood shingles, cooperage stock, particleboard, and gum and wood chemicals.²

Lumber, plywood, woodpulp, and paper and board most important primary manufacturing products

The most important products of the primary manufacturing industries in 1972 were 31 billion board feet of softwood lumber, 6.8 billion board feet of hardwood lumber, 18.3 billion square feet (3/8-inch basis) of softwood plywood, 2.1 billion square feet (3/8-inch basis) of hardwood plywood, and 46.8 million tons of woodpulp (tables A-8, A-9, and A-10). In addition, these industries produced about 59.5 million tons of paper and board (mostly from woodpulp); 3.1 million square feet (3/4-inch basis) of particleboard; 1.6 million drums of rosin (520 pound net basis); 566,000 barrels (50 gallon basis); 531,000 tons of charcoal briquets; and numerous other products.

For most products, the volume produced in 1972 represented substantial increases over output in 1967 and 1963. For example, between 1963 and 1972 particleboard production increased sixfold, softwood plywood production 79 percent, woodpulp production 55 percent, paper and board 52 percent, hardwood plywood 25 percent, and softwood lumber 12 percent. The only solid wood product to exhibit a decline was hardwood lumber with a drop of about 5 percent. Turpentine and rosin output were also down.

The geographic distribution of production varied for the individual products, and some exhibited important regional shifts during the years covered by the study. In 1972, about 71 percent of the softwood lumber and softwood plywood was produced in the West, principally in Washington, Oregon, and California. For softwood lumber, this was only slightly less than the 73 percent pro-

duced in the West in 1963. For softwood plywood, however, the proportionate shift of production to the South was dramatic after production started in that region in 1964. About 63 percent of hardwood lumber production and 43 percent of hardwood plywood output were from mills in the South in 1972. For both products, this represented a slightly smaller proportion than in 1963. Hardwood lumber production showed a small shift to the North, while the West gained in the relative proportion of hardwood plywood output at the expense of both the other two regions. This came despite the lack of a large domestic hardwood timber resource in the West and was presumably based primarily on imported veneer.

Of the other major primary products, about 65 percent of the woodpulp, 49 percent of the particleboard, and nearly all of the naval stores were from the South. For woodpulp and particleboard, these were somewhat larger proportions than in 1963.

Value of products shipped from primary manufacturing industries \$23 billion in 1972

The total value of products shipped from the primary manufacturing industries in 1972 amounted to \$23.1 billion (table A-11). This was 86 percent larger than the \$12.4 billion shipped in 1963 and 54 percent above 1967. These increases were due to the rise in product prices during the study period and to the growth in the physical volume of product shipments. In terms of constant 1972 dollars, total value of shipments from the primary manufacturing industries increased about 55 percent between 1963 and 1972.³

cent—reflects increases in product prices.

Unlike value added, value of shipments data for the primary manufacturing industries include double counting because products of one mill or plant may be shipped as raw material to other plants in the same industry or to others classified in the primary manufacturing categories. For example, the value of lumber shipped from a sawmill to a plywood plant may be counted twice, once as a shipment from the sawmill and again as core material in a shipment from the plywood plant.

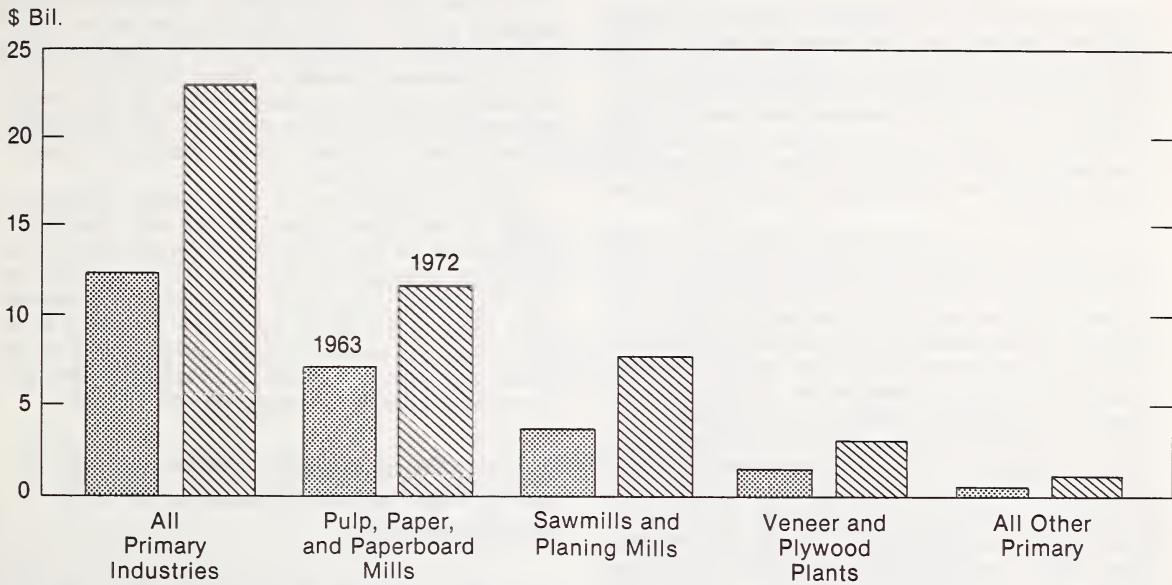
Over half of shipments from pulp, paper, and paperboard mills

In 1972, 51 percent of the value of product shipments from primary manufacturing industries originated in pulp, paper, and paperboard mills, 33 percent in sawmills and planing mills, 13 percent in veneer and plywood plants, and 3 percent in such primary manufacturing enterprises as particleboard plants, and cooperage and wood shingle mills (table A-11, fig. 6).

² See Appendix B for the SIC firms included in the major industry groups.

³ The implicit price deflator for net domestic product in manufacturing was used to derive estimates of value of shipments in 1972 dollars.

Figure 6

Value of Primary Manufacturing Shipments, by Industry, 1963 and 1972

As shown in figure 6, the value of shipments from each of the primary manufacturing industry sectors increased between 1963 and 1972. This was also true in terms of constant dollars, reflecting the increases in physical output discussed earlier. Because product output and prices followed somewhat different trends among the various industries, the proportion of total shipments attributable to each industry in 1972 was somewhat different from that in 1963 and 1967. Over the total study period, value of shipments from all except the pulp, paper and paperboard industry gained in relative proportion. Much of the increase for the industries classified in "all other" between 1967 and 1972 was due to reclassification of the rapidly growing particleboard industry in 1972. (See Appendix B.)

The South, with \$9.4 billion, led all sections of the Nation in value of products shipped from primary manufacturing industries in 1972. This represented some 41 percent of the national total, up from 37 percent in 1963. The West's share of the total also increased between 1963 and 1972, rising to \$7.5 billion, nearly nine-tenths of which was from the Pacific region.

Oregon and Washington led all the other States in value of shipments with a total of almost \$3.0 billion and \$2.0 billion, respectively (table A-12). Georgia and Wisconsin had the highest totals for States outside of the Pacific region and were the only States in the East to exceed \$1.0 billion in total value of shipments from primary manufacturing industries.

The West led all other sections of the Nation in value of shipments from sawmills and planing mills and from veneer and plywood plants in 1972 (table A-11). The South was first in shipments from pulp, paper, and paperboard mills and from those classified in "all other." In 1967 and 1963, the North was the predominant shipper of products from the pulp, paper, and paperboard industry.

The pulp, paper, and paperboard industry was the largest contributor to total value of shipments in both the North and the South in all study years (table A-11). In 1972, about four-fifths of the total value of shipments in the North and more than half in the South was from pulp, paper, and paperboard mills. In the West, sawmills and planing mills were most important.

Value added in the primary manufacturing industries \$10.1 billion in 1972

Part of the value of shipments from the primary manufacturing industries represents the cost of stumpage, logs, fuels, chemicals, and other intermediate products purchased from other sectors of the economy. When the costs of these products were deducted from the value of shipments, the value added in primary manufacturing amounted to an estimated \$10.1 billion in 1972, up some 51 percent from 1967 and 85 percent above 1963 (tables A-13 and A-14).

As shown in the source notes to table A-13, these estimates of value added are somewhat below those given in the 1972, 1967, and 1963 *Censuses of Manufactures*, because of differences in definition and coverage. Data shown for primary manufacturing industries in Bureau of the Census publications include value added by logging operations when such operations are conducted by employees of the primary industry. For purposes of this study, the estimated value added in these logging operations was excluded from the totals for primary manufacturing. In addition, the value added for sawmills and planing mills in the East, as reported in the *Census of Manufactures*, was adjusted to include the estimated value added in small sawmills not covered by Census estimates. The combination of these two adjustments resulted in an estimated total value added for this study some \$222.6 million below the Census data for 1972.

Value added attributed to timber \$8.8 billion

The enterprises classified in the primary manufacturing industries based most of their manufacturing operations on timber products. For example, timber products composed about 95 percent of the cost of materials consumed in the sawmill and planing mills industry, and nontimber materials made up about 5 percent. In the veneer and plywood industry and in the pulp, paper, and paperboard industry, timber products accounted for about 87 percent and 85 percent, respectively, of the cost of materials consumed. Less than 70 percent of the cost of materials consumed by plants in the "all other" industry was for timber products.

By using the proportion of the various materials consumed in each of the SIC industries which make up the primary manufacturing industries in this study (see Appendix B) to allocate total value added, the value added attributed to timber was estimated at \$8.8 billion in 1972 (tables A-15 and A-16). This was about 56 percent larger than in 1967 and 83 percent above the comparable value in 1963.

In 1972, about 52 percent of the value added attributed to timber in the primary manufacturing industries originated in the pulp, paper, and paperboard sector (fig. 7). Another 33 percent originated in sawmills and planing mills, 12 percent in veneer and plywood plants, and 3 percent in other primary manufacturing enterprises. This distribution was somewhat different from that in 1963, primarily because of the changes in the relative value of shipments from the various industries, and some change in the volumes of timber products consumed in relation to all products consumed.

About 41 percent of the value added attributed to timber in the primary manufacturing industries in 1972 originated in the South, up from 39 percent in 1963. The percentage originating in the West also increased in the 1963-72 period, rising from 28 percent to 33 percent. Most of the decline in the percentage originating in the North was due to the relatively slower growth of the veneer and plywood industry and the pulp, paper, and paperboard industry in that section of the Nation.

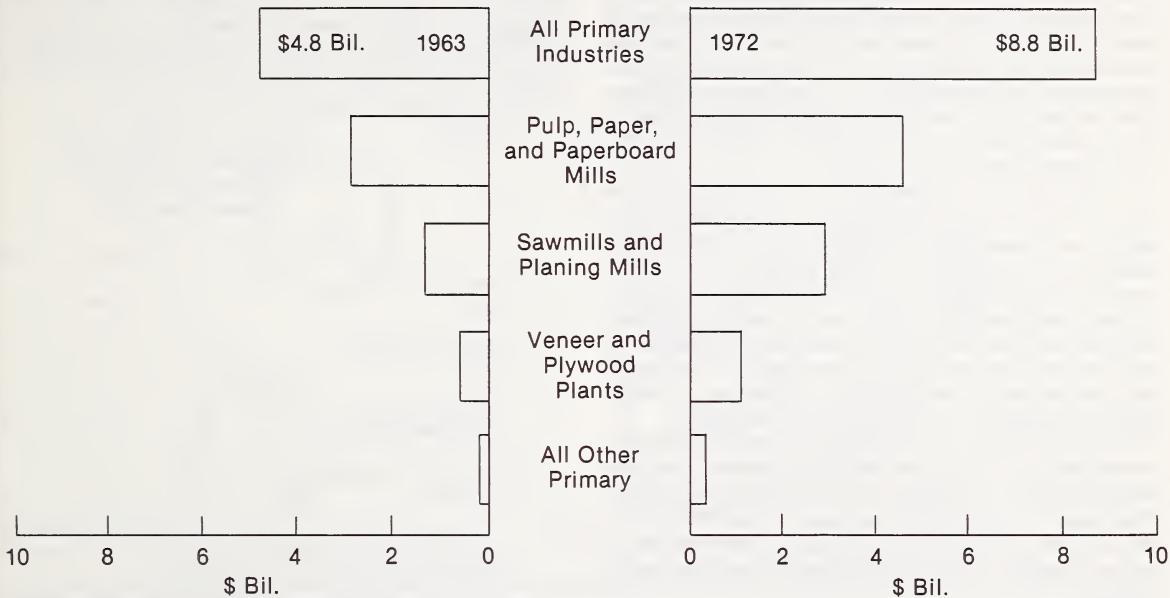
Value added attributed to timber per unit of timber input highest for pulp, paper, and paperboard mills

As shown in the following tabulation, the value added attributed to timber per cubic foot of wood consumed in the pulp, paper, and paperboard industry was more than 2.5 times the average for the sawmills and planing mills industry and 64 percent above the average for veneer and plywood plants. The primary reasons for these variations are differences in relative cost of the various materials used in the manufacturing processes, the degree of processing, and the value of products manufactured.

Industry	Value added attributed to timber per cubic foot of wood consumed, 1972 ¹ (dollars)
Sawmills and planing mills	0.49
Veneer and plywood	.77
Pulp, paper, and paperboard	1.26

¹ Estimates derived by dividing value added attributed to timber in each industry (table A-15) by the volume of wood harvested by type of timber product (table A-3).

Figure 7

Value Added Attributed to Timber in Primary Manufacturing, by Industry, 1963 and 1972**Employment in primary manufacturing industries 487,900 in 1972**

In 1972, some 487,900 persons were employed in the primary manufacturing industries (tables A-17 and A-18). This was about 3 percent below the total 502,400 employed in 1963. Although there was some variation, the trend over the entire study period was down for the sawmills and planing mills and slightly up for the veneer and plywood plants and the pulp, paper, and paperboard mills. The industries classified in "all other" showed an increase of about 46 percent between 1963 and 1972; however, this was primarily due to the inclusion of the particleboard industry for the first time in 1972. (See Appendix B.)

The decline in the number of employees in the sawmills and planing mills industry, despite the rise in product output over the study period, was the result of significant increases in productivity. According to data published by the Bureau of Labor Statistics, output per employee hour rose at an average annual rate of 2.8 percent in the sawmills and planing mills industry (SIC 2421) between 1963 and 1972. These gains resulted from substantial technological change in plant design, sawing machinery and methods, and lumber handling equipment. Also im-

portant to the overall increase in industry productivity was the continuing decline in the number of small, relatively less efficient mills, particularly in the East. Although no exact numbers are available, trend estimates indicate that as many as 10,000 of these mills may have gone out of existence during the study period.

There were also significant increases in productivity in the veneer and plywood industry and the pulp, paper, and paperboard industry between 1963 and 1972, resulting in only modest increases in employment despite large rises in industry output. Bureau of Labor Statistics data show that output per employee has increased at average annual rates of 3.9 percent and 4.0 percent, respectively, for the veneer and plywood industry and the pulp and paperboard industry.

As discussed earlier in this report, the estimates of employment shown in table A-17 and A-18 are somewhat below those contained in the 1972, 1967, and 1963 *Censuses of Manufactures* because of differences in coverage and industry definitions. The adjustments to the data from the Census studies for small sawmill and logging employment resulted in an estimated total employment for this study some 19,500 below the Census data for 1972 (see source notes, table A-17).

Employment attributed to timber in primary manufacturing 426,550 in 1972

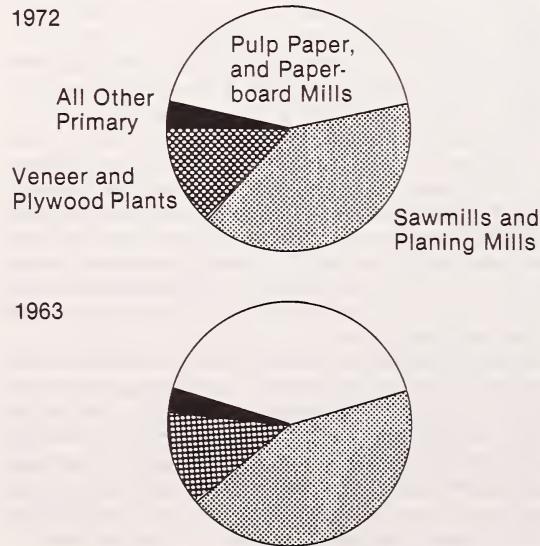
As discussed earlier, most of the timber-based enterprises classified in the primary manufacturing industries based part of their manufacturing operations on non-timber materials. Because of this, only a part of the total employment in these industries was attributed to timber. This amounted to the equivalent of 426,550 people in 1972, down from a total of 437,500 in 1967 and 449,750 in 1963 (tables A-19 and A-20).

In 1972, about 43 percent of the employment attributed to timber in primary manufacturing was in pulp, paper, and paperboard mills (fig. 8). An additional 40 percent was in sawmills and planing mills, 14 percent in veneer and plywood plants, and 3 percent in "other" primary manufacturing. This was somewhat different from the distribution in 1963, when about 44 percent of the total was in sawmills and planing mills; 41 percent in pulp, paper, and paperboard mills; 13 percent in veneer and plywood plants; and 3 percent in "all other."

These distributions of employment were in large part determined by the relative volumes of wood processed, the degree of its processing, and trends in these factors. The degree of processing is particularly important in explaining the relatively large volumes of employment in the pulp, paper, and paperboard industry and the veneer

Figure 8

Timber-Based Employment in Primary Manufacturing, by Industry, 1972 and 1963



and plywood industry. As shown in the following tabulation, the employment attributed to timber per unit of wood input was much larger in the pulp, paper, and paperboard industry and the veneer and plywood industry than in the sawmills and planing mills industry in both 1963 and 1972. In addition, the increases in productivity discussed earlier can be seen in the decline in the number of employees per unit of wood input.

Industry	Number of employee years attributed to timber per million cubic feet of wood consumed ¹	
	1972	1963
Sawmills and planing mills	29	37
Veneer and plywood plants	42	62
Pulp, paper, and paperboard mills	50	68
All primary manufacturing industries	36	43

¹ Estimates derived by dividing employment attributed to timber in each industry (table A-19) by the volume of wood produced by type of timber product (table A-3).

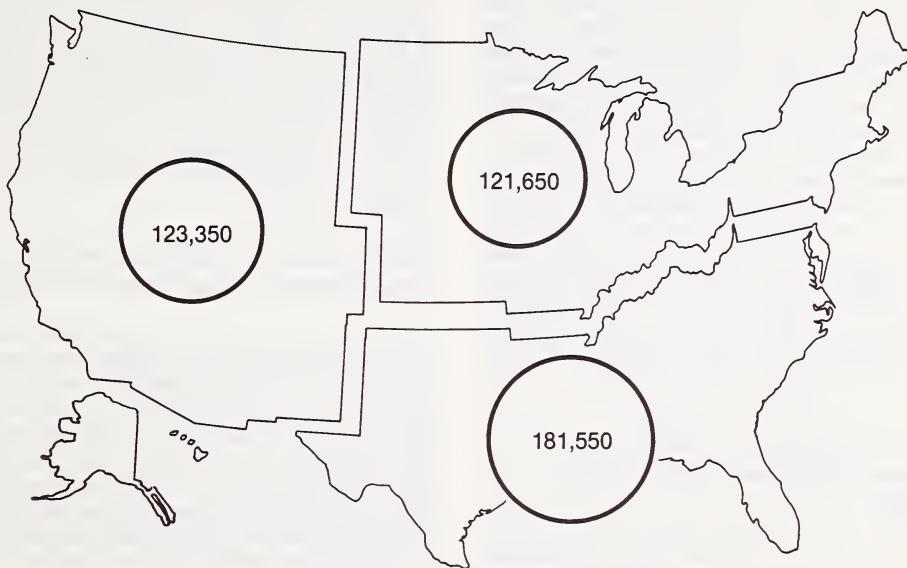
In 1972, about 43 percent of the total employment attributed to timber was in the South, 29 percent in the West (table A-19, fig. 9). In the West and the South, sawmills and planing mills were the leading employer among the primary manufacturing industries. Pulp, paper, and paperboard mills were the largest primary industry employer in the North.

Average value added per employee different by industry and region

Because of differences in such factors as degree of process automation, scale of operations, capital investment, worker and managerial skills, and differences in wage rates, there is a great deal of variation in average value added per employee among the primary manufacturing industries. In 1972, average value added per employee in the pulp, paper, and paperboard industry was \$24,880—about 51 percent larger than the average \$16,510 in the sawmills and planing mills industry and a third above the \$18,650 average for veneer and plywood plants. There was also considerable regional difference in value added per employee for the various industries. In the sawmills and planing mills industry, for example, the average ranged from a low of \$12,900 in the South to \$22,135 in the West. Value added per employee for both the veneer and plywood industry and the pulp, paper, and paperboard industry was lowest in the North and highest in the West.

Figure 9

Timber-Based Employment in Primary Manufacturing, 1972
(Total 426,550)



Secondary Manufacturing

Many of the products produced by the primary manufacturing industries, such as newsprint, charcoal, and lumber and plywood for do-it-yourself use, are ready for marketing to final consumers. Other primary products, however, such as the dissolving grades of wood pulp, much of the paper and paperboard, and substantial volumes of lumber, veneer and plywood, and particleboard are further manufactured into wearing apparel, containers, furniture, and other consumer goods.

This secondary manufacturing is accomplished in groups of firms that have been classified for this study as the millwork and prefabricated wood products industry; the wooden containers industry; the furniture industry; the paper and paperboard products industry; the fibers, plastics, and textiles industry; and "all other"—a group which includes firms engaged in wood preservation, and in the manufacture of such diverse products as mirror and picture frames, shoe lasts, cork products, ships and boats, toys, and sporting and athletic goods.⁴

Shipments from selected secondary manufacturing industries in 1972 twice those in 1963

In 1972, the total value of shipments from the millwork and prefabricated wood products, wooden containers, furniture, and paper and paperboard products industries amounted to an estimated \$35.5 billion (tables A-21 and A-22).⁵

About 47 percent of these shipments originated in the paper and paperboard products industry, 28 percent in the furniture industry, 23 percent in the millwork and prefabricated wood products industry, and 2 percent in the wooden containers industry.

Total value of shipments for these selected industries in 1972 was more than double the \$17.4 billion in 1963. Although there were increases in shipments from each of the four industries during the study period, the millwork and prefabricated wood products industry showed the largest rise, more than tripling.⁶

⁴ See Appendix B, for the SIC firms included in the major industry groups.

⁵ No attempt has been made to show the total value of shipments from all secondary manufacturing industries because of the unknown but considerable amount of duplication resulting from intraindustry and interindustry shipments of products, particularly in the fibers, plastics, and textile products industry.

⁶ Some of the differential growth between industries was possibly due to changes in industry definitions during the study period. (See Appendix B).

⁷ No attempt was made to compile the total value added by manufacturing for industries in the "all other" grouping. Since some timber products are used in most manufacturing industries, such a total would represent a substantial part of all value added in manufacturing. (See Appendix B).

Shipments from the wooden containers industry rose 93 percent, from the furniture industry 9 percent, from the paper and paperboard products industry 78 percent.

Value of shipments was largest in the North in all 3 study years. However, there were important regional shifts between 1963 and 1972. For example, about 52 percent of the total shipments from the four selected industries was in the North in 1972, down from 60 percent in 1963. During the same period, shipments from industries in the South increased from 26 percent to 34 percent of the total. Western shipments were about 14 percent in both years.

Value added in selected secondary manufacturing industries \$34.0 billion 1972

A substantial part of the value of shipments from the secondary manufacturing industries represented the cost of materials, supplies, containers, fuel, and other supplies and services purchased from other firms and industries. When these costs were deducted from the value of shipments, the value added in the selected secondary manufacturing industries listed above and in the fibers, plastics, and textile industry amounted to \$34.0 billion in 1972, up about 77 percent from the \$19.3 billion estimated for 1963 (tables A-2 and A-24).

In all 3 study years, the fibers, plastics, and textiles industry led the other selected secondary industries in value added; however, its relative proportion declined from about 60 percent in 1963 to 52 percent in 1972. All the other industries showed some percentage increase, except for wooden containers which remained about 1 percent of the total.

Value added attributed to timber in secondary manufacturing \$12.5 billion industries in 1972

The secondary manufacturing industries based only part of their manufacturing operations on timber products. In some enterprises, such as those manufacturing nailed wood boxes and shook, wood pallets and skids, and wood containers, not classified elsewhere, timber products accounted for as much as 90 percent of the cost of all materials consumed. However, in others, such as those engaged in manufacturing many textile products, timber-based products accounted for as little as 5 percent.

Based largely on the proportionate cost of timber products consumed, the value added attributed to timber in the secondary manufacturing industries listed above and in "all others" using timber products, was estimated at \$12.5 billion in 1972, about 88 percent larger than the \$6.6 billion estimated for 1963 (tables A-25 and A-26, fig. 10). The contributions of the various secondary in-

dustries to the total were somewhat different. In 1972, about 40 percent of the total originated in the paper and paperboard products industry. An additional 21 percent was added in the fibers, plastics, and textiles industry—mostly in firms engaged in throwing, spinning, and weaving rayon and in manufacturing rayon clothing. The millwork and prefabricated wood products industry accounted for another 16 percent, the furniture industry 14 percent, the wooden containers industry 3 percent, and “all other” secondary manufacturing industries about 6 percent. This was somewhat different from the distribution in 1963, when the millwork and prefabricated wood products industry composed only 9 percent of the total, and the fibers, plastics, and textiles industry 27 percent. The remaining industries showed relatively small changes.

Because of differences in the importance of timber products as a raw material in the various industries, the distribution of value added attributed to timber by industry was markedly different from that of total value added. For example, the value added attributed to timber was a relatively small part of the total value added in the fibers, plastics, and textile industry, a somewhat larger part in the furniture industry, and largest for the millwork and prefabricated wood products, wooden containers, and paper and paperboard products industries.

In 1972, about 52 percent of the value added attributed to timber in the secondary manufacturing industries was in the North, 36 percent in the South, and 12 percent in West (table A-26). In 1963, the North accounted for 58 percent, the South 31 percent, and the West 11 percent. These shifts were largely the result of differential regional growth for the various industries. For example, in 1963, the North led in value added attributed to timber in five of the six secondary industries, trailing only the South in the wooden container industry. However, by 1972, the South also led in the furniture, and the fibers, plastics, and textiles industries, and had shown faster growth in the remaining two industry groups.

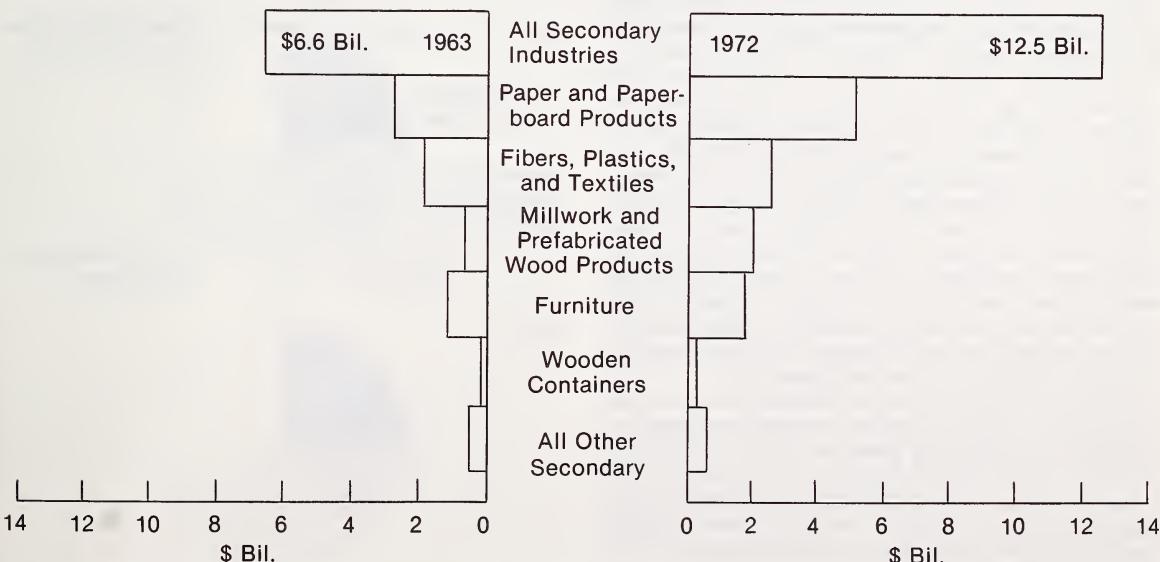
Employment in selected secondary manufacturing industries 2.7 million in 1972

Employment in all the secondary manufacturing industries except the “all other” grouping⁸ amounted to about 2.7 million in 1972, slightly above employment in 1967 and about 10 percent more than the 2.5 million employed in 1963 (tables A-27 and A-28). Three-fifths of the total in 1972 was in the fibers, plastics, and textile in-

⁸ No attempt was made to compile total employment in the “all other” secondary manufacturing grouping. Since some timber products are used in most manufacturing industries, such a total would represent a substantial part of all employment in manufacturing. (See Appendix B).

Figure 10

Value Added Attributed to Timber in Secondary Manufacturing, by Industry, 1963 and 1972



dstry, and 15 percent each in the furniture industry and in the paper and paperboard products industry.

The South had the greatest number of employees in the selected secondary manufacturing industries in 1972, displacing the North which led in 1963. Among the various industries, the South was the largest employer in the fibers, plastics, and textiles industry, the furniture industry, and the wooden containers industry, while the North continued to lead in the millwork and prefabricated wood products industry and in the paper and paperboard products industry. In 1963, the North was the largest regional employer in all except the wood container industry.

Employment attributed to timber in secondary manufacturing industries 900,400 in 1972

In 1972, the employment attributed to timber amounted to an estimated 900,400 people (full-time equivalent) in the industries classified in the secondary manufacturing groupings (including employment attributed to timber in "all other") (tables A-29 and A-30). This was almost 50,000 more than in 1967 and up 14 percent from the 789,800 estimated for 1963. As discussed earlier, these estimates of employment attributed to timber were largely based on the relative cost of timber-based raw materials consumed.

About 31 percent of the total employment attributed to timber in 1972 originated in the paper and paperboard products industry (fig. 11). An additional 27 percent was in the fibers, plastics, and textiles industry, 17 percent in the furniture industry, 15 percent in the millwork industry, 4 percent in the wooden containers industry, and 6 percent in "all other" secondary manufacturing industries. These were about the same percentages as in 1963 for the paper and paperboard products, the furniture, and the wooden containers industries. The fibers, plastics, and textiles industry and the "all other" grouping, on the other hand, showed little change in total employment, and thus, a decline in relative proportion. Employment attributed to timber in the millwork and prefabricated wood products industry increased more than 90 percent; however, as discussed earlier, much of this was probably due to the changes in industry composition and classification shown in Appendix B.

As shown in figure 12 and the following tabulation, the North led in total employment attributed to timber in secondary manufacturing industries in all 3 study years. However, because of such factors as differential industry growth, regional shifts, differences in productivity, and changes in timber products use, its relative share dropped steadily. Most of this decline was counterbalanced by increases in the South.

Region	Relative share of total employment attributed to timber in secondary manufacturing industries		
	1972 (percent)	1967 (percent)	1963 (percent)
North	48	53	55
South	41	37	35
West	11	10	10
All regions	100	100	100

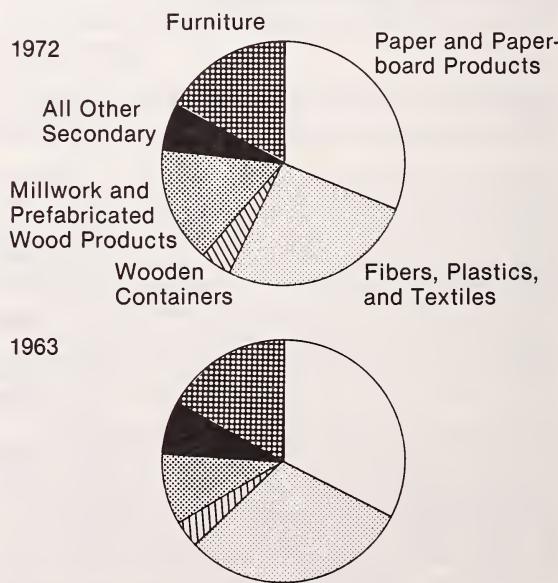
Among the various secondary manufacturing industries, the North showed relatively slower growth than the South and West in employment attributed to timber in the millwork and prefabricated wood products and paper and paperboard products industries and an actual decline for the furniture; fibers, plastics, and textiles; and "all other" industries.

Average value added per employee highest in the paper and paperboard products industry

The average value added per employee varied considerably among the secondary manufacturing industries. For example, in 1972, the average in the paper and paper-

Figure 11

Timber-Based Employment in Secondary Manufacturing, by Industry, 1972 and 1963

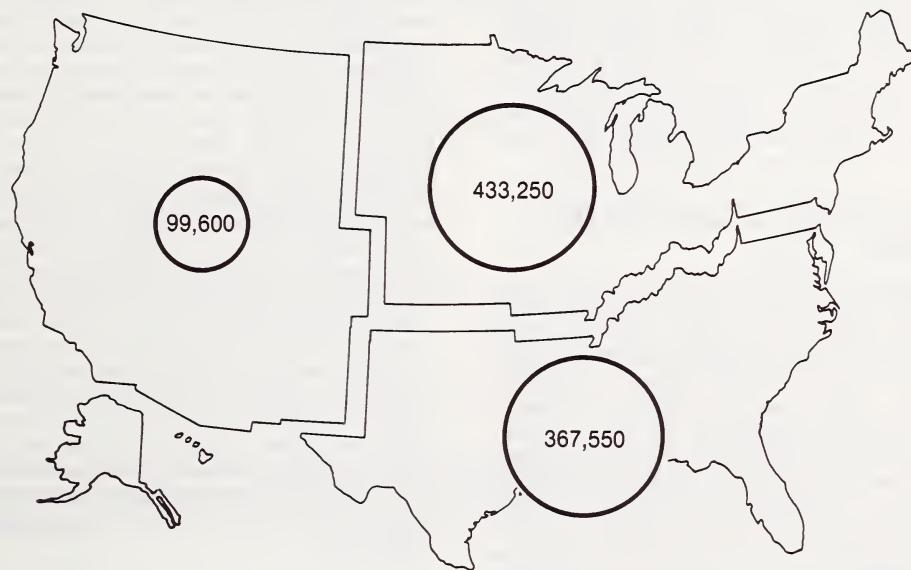


board products industry was about \$18,420—almost double the average \$9,725 in the wooden containers industry. There was also a substantial range in averages between regions within the same industry. Most of these varia-

tions are due to such factors as regional and industry differences in worker and managerial skills, wage rates, process automation, capital investment, and scale of operations.

Figure 12

Timber-Based Employment in Secondary Manufacturing, 1972 (Total 900,400)



Construction

Construction is the most important final use for timber products. Recent studies have shown that in the 1960's and early 1970's as much as three-fourths of the softwood lumber and plywood; a tenth of the pulp products; all of the poles, piling, and shingles; and significant quantities of other timber products consumed in the United States, were used in construction.

Construction, as defined for this study, includes the erection, maintenance, and repair of immobile structures and utilities, together with their integral service facilities. Structures include buildings, docks, bridges, railways, and other similar works that are built into or affixed to the land. Utilities are such things as electric light and power transmission lines, telephone and telegraph lines, sewers, and other similar facilities generally used for supplying services to individuals and establishments.

Value of construction an estimated \$159 billion in 1972

Construction grew rapidly during the study period. The estimated total value of new construction and maintenance and repair construction was about \$159.1 billion in 1972, up from \$85.3 billion in 1963. The largest single construction component in terms of value was residential construction. In 1972, for example, nearly 44 percent of the total value of new construction put in place was attributable to private residential building (table A-31). Housing is also the most important construction sector in terms of wood products use. An estimated 41 percent of all of the softwood sawtimber products consumed in the United States in 1972 was used for new housing units. More than 95 percent of this was consumed in the 2.4 million housing units constructed on-site (table A-32).⁹

A substantial part of the expenditures for construction, and of the value of a firm's production, represents payments for construction work subcontracted to other firms and payments for materials, components, and supplies purchased from other sectors of the economy. When estimates of these costs (and receipts for land development for certain firms) were taken into consideration, the value added in construction amounted to an estimated \$79.6 billion in 1972, 59 percent above 1967 and 93 percent larger than the \$41.1 billion estimated for 1963 (table A-33).

⁹ Mobile homes are a product of industry SIC 2451 and for purposes of this study were classified in secondary manufacturing in the millwork and prefabricated wood products industry. (See appendix B.)

¹⁰ As in the table A-34, these are estimates of total construction employment and thus considerably exceed those in Contract Construction (SIC's 15, 16, and 17) alone, as shown in the *Censuses of Construction Industries*.

Value added attributed to timber in construction \$11.9 billion in 1972

The volume of construction and, consequently, the value added in construction, vary substantially between the sections and regions of the Nation. In addition, there are marked differences in the types of buildings and other structures constructed and in the volumes and kinds of materials used to build them. For example, studies have shown that the cost of lumber and other wood products as a percent of the total cost of materials, supplies, and equipment may vary from 41 percent for single-family housing to 22 percent for multifamily housing to as little as 0.8 percent for sewer line construction. Moreover, because of such factors as size, style, consumer preferences, and regional materials availability and cost, the kinds of materials used in a given type of construction may be quite different in different areas. By assuming that value added could be allocated in proportion to the cost of the various materials used, the value added attributed to timber was estimated at \$11.9 billion in 1972, \$6.7 billion in 1967, and \$6.2 billion in 1963 (table A-33).

In 1972, about 46 percent of the value added attributed to timber was in the North, 32 percent in the South, and 22 percent in the West (fig. 13). This represented a rather large gain since 1963 for the South at the expense of the other two regions. California was the leading State, accounting for 11 percent of total value added attributed to timber nationwide and over half of that in the West. New York, Florida, Texas, and Illinois ranked next in order of importance.

Construction employment 5.3 million in 1972—795,250 attributed to timber

In 1972, the equivalent of about 5.3 million employees was engaged in construction activities (table A-34), an increase of about 21 percent from the 4.4 million employed in 1963.¹⁰ Using the proportionate cost of timber products by building type, year, and region as discussed earlier and in table A-34, the employment attributed to timber rose from 647,150 in 1963 to 795,250 in 1972.

In 1972, about 42 percent of total employment attributed to timber was in the North, 39 percent in the South, and 19 percent in the West (fig. 14). As was true for value added, this represented a proportionate gain for the South, and losses for the North and West. California was the leading State for construction employment attributed to timber; Florida, Texas, and New York followed in order.

Figure 13

Value Added Attributed to Timber in Construction, by Region, 1963 and 1972

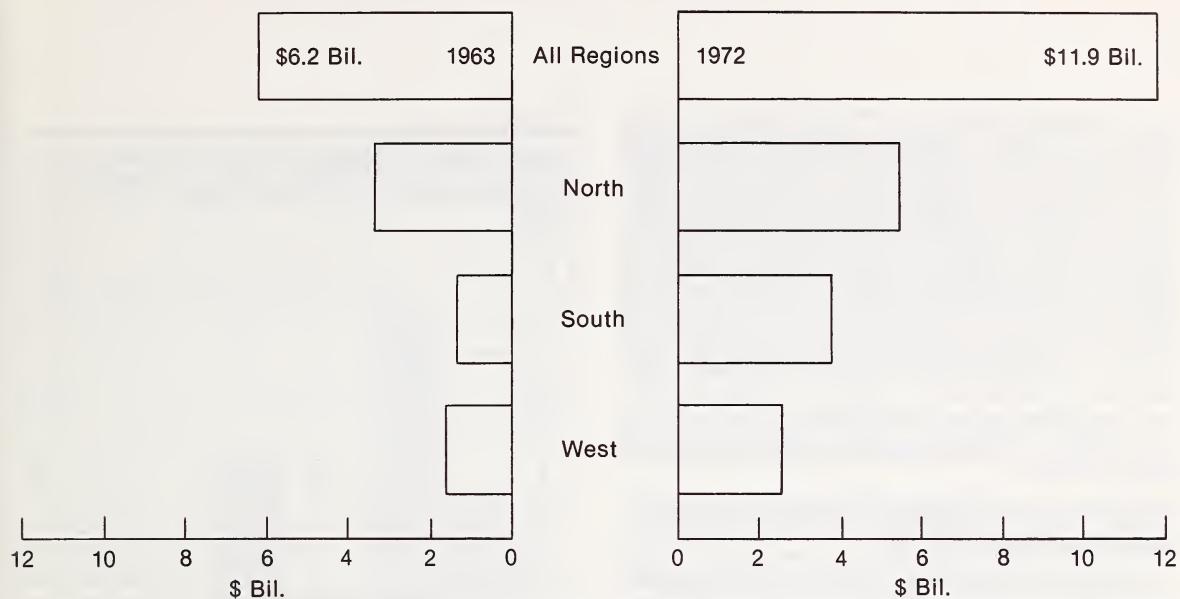
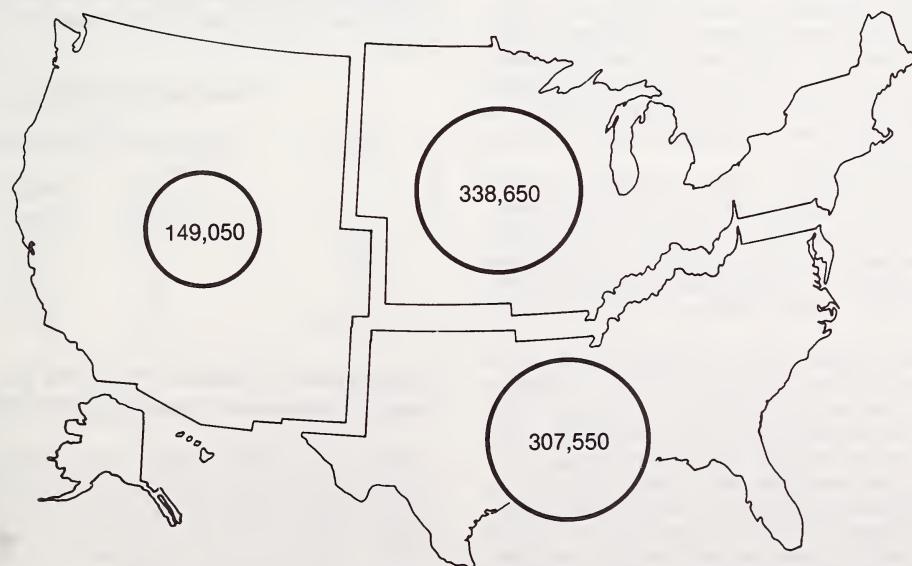


Figure 14

Timber-Based Employment in Construction, 1972 (Total 795,250)



Transportation and Marketing

The activities discussed in the earlier sections of this report have been concerned with producing and harvesting timber products and converting these products into finished goods. There are also other kinds of activities involved in preparing timber and related products for use by final consumers. These include transporting logs and other timber products from local points of delivery to manufacturing plants or consumers; transporting primary and secondary products from points of manufacture to final consumers; and marketing these products through wholesale and retail channels. These activities are carried on in a group of enterprises that have been classified as the railroad, truck, and water transportation industries, and the wholesale and retail trade industries.

Value added in transportation and marketing about \$194 billion in 1972

The total value added in transportation and marketing amounted to an estimated \$194 billion in 1972, up from \$127 billion in 1967 and \$97 billion in 1963. In all 3 years, more than four-fifths of the total originated in marketing, largely in the retail trade sectors (table A-35).

Value added attributed to timber in transportation and marketing, \$9.3 billion in 1972

Only a relatively small part of the activity of enterprises in transportation and marketing was based on timber products. In the transportation industries in 1972, these products accounted for about 13.5 percent in railroad transportation, 10.3 percent in water transportation, and 5.7 percent in truck transportation. In wholesale trade and retail trade, sales of timber products accounted for slightly over and slightly under 4 percent, respectively, of total sales.

By assuming that value added attributed to timber products could be estimated from their relative proportion of total freight revenues or wholesale or retail sales, the total value added attributed to timber in transportation and marketing was estimated at \$9.3 billion in 1972, \$6.4 billion in 1967, and \$5.5 billion in 1963 (table A-35, fig. 15).

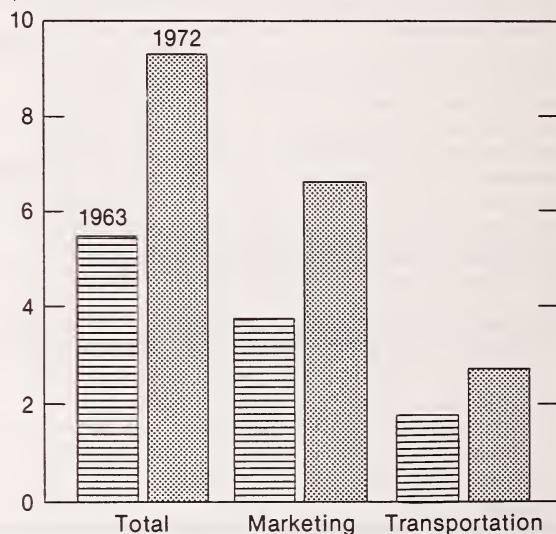
The industry origins of the value added attributed to timber are shown in tables A-36 and A-37. In 1972, about 71 percent of the total was added in marketing—mostly in retailing. The remaining 29 percent was in transportation, largely in railroad and truck transportation.

As shown in the tabulation below, about 50 percent of the total value added attributed to timber in transportation and marketing in 1972 was in the North, 30 percent in the South, and 20 percent in the West. This was somewhat different from the distribution in 1963, when about

Figure 15

Value Added Attributed to Timber in Transportation and Marketing, 1963 and 1972

\$ Bil.



56 percent was in the North and 24 percent in the South. The Western proportion did not change during the study period.

Region	Value added attributed to timber in transportation and marketing	
	1972 percent	1963 percent
North	50	56
South	30	24
West	20	20
All regions	100	100

Employment attributed to timber in transportation and marketing 835,150 in 1972

About 18.7 million people were employed in transportation and marketing in 1972 (table A-38). This was some 13 percent above 1967 and 24 percent larger than the 15.0 million employed in 1963. In all 3 years, nearly nine-tenths of the total was in marketing—largely in retail trade (tables A-39 and A-40).

By assuming that timber-based employment in transportation and marketing could be estimated from the proportion of freight revenue from or sales of the various timber products, the employment attributed to timber was calculated to total the equivalent of 835,150 employees in 1972, about the same as in 1967 and up some 4.3 percent from 800,400 in 1963.

Marketing accounted for four-fifths of the total combined employment attributed to timber in transportation and marketing in 1972. In all, 669,700 people were employed in timber-based marketing activities in 1972, up 10 percent from the 610,200 employed in 1963 (table A-40). Although there was some fluctuation, employment attributed to timber increased in both retail and wholesale trade during the study period.

Employment attributed to timber in transportation, on the other hand, declined between 1963 and 1972, dropping 13 percent to 165,450 (table A-39). Truck transportation registered an increase; however, both railroad and water transportation employment dropped sharply.

Because of a number of factors that include population patterns, industry locations, and resource availability, the employment attributed to timber in transportation and marketing varied somewhat between the major sections of the Nation. In 1972, for example, about 49 percent of the total was in the North, 32 percent in the

South, and 19 percent in the West (fig. 16). This represented a substantial proportionate gain for the South and decline for the North during the study period. The percentage in the West showed a small rise.

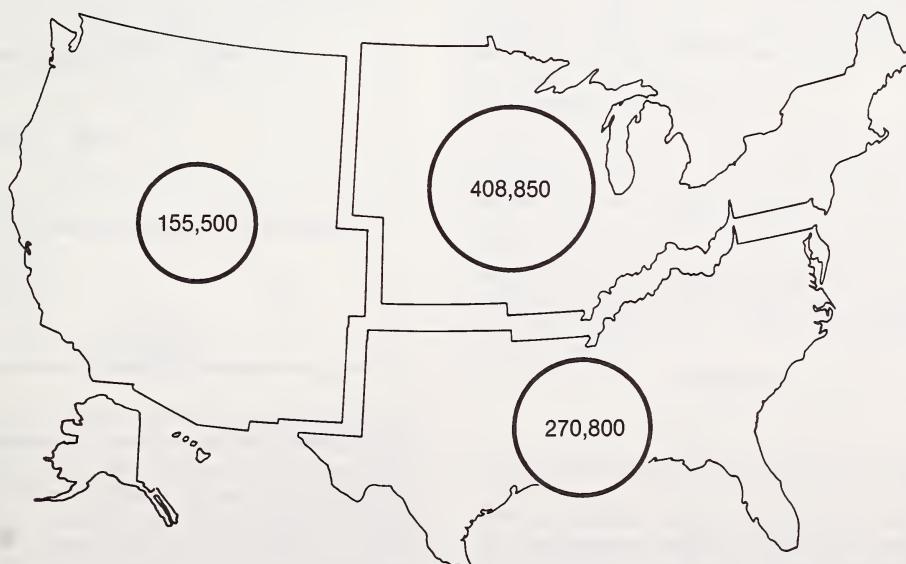
In 1972, the employment attributed to timber in transportation and marketing made up about 4.5 percent of the total employment in these combined industries, down from 5.3 percent in 1963. This decline resulted from drops in the percentages both for wholesale and retail trade and for truck and water transportation.

Average value added per employee highest in railroad transportation, lowest in retail trade

In 1972, average value added per employee in transportation and marketing ranged from a high of about \$18,010 in railroad transportation to a low of \$7,330 in retail trade. There was also a substantial range in the average value added per employee among the regions of the country within the same industry. As discussed for other industries, most of the variation is due to such factors as regional and industry differences in worker and manager skills, wage rate, capital investment, and scale of operations.

Figure 16

Timber-Based Employment in Transportation and Marketing, 1972 (Total 835,150)



Conclusion

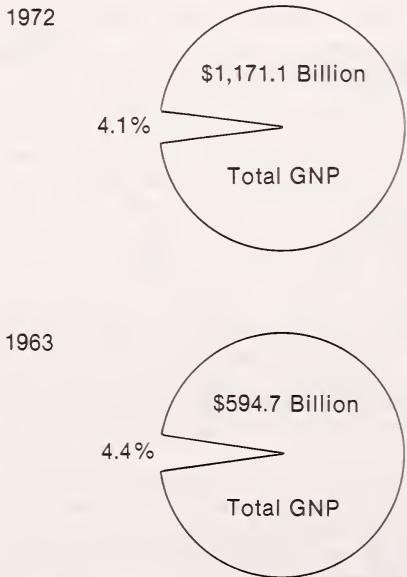
In the preceding sections of this report, estimates of value added and employment attributed to timber in the major timber-based economic activities have been presented. In this section and in table 1 shown on page 5, these estimates are combined and estimates of total gross national product and employment originating in all timber-based economic activities are presented.

About 4.1 percent of the Nation's GNP from timber-based economic activities

The sum of the values added attributed to timber in all kinds of timber-based economic activities amounted to about \$48.5 billion in 1972 (tables A-41 and A-42). This represented about 4.1 percent of the Nation's GNP (fig. 17). This means that about \$1 out of every \$24 of the GNP originated in some type of timber-based economic activity. In 1963, the sum of the values added attributed to timber totaled \$26.1 billion and composed 4.4 percent of the GNP.

Figure 17

Gross National Product Originating in Timber-Based Activities, 1972 and 1963



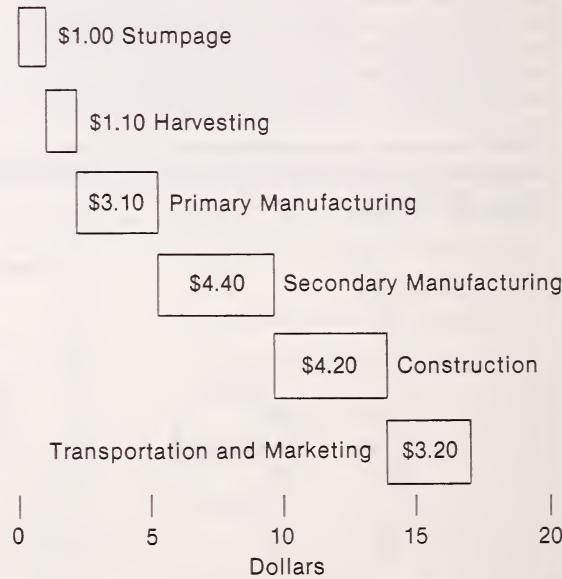
Of the total value added attributed to timber in 1972, about 6 percent was added in timber management. Another 6 percent was added in harvesting, 18 percent in primary manufacturing, 26 percent in secondary manu-

facturing, 25 percent in construction, and 19 percent in transportation and marketing. The distribution of total value added attributed to timber was about the same in 1963 and 1967.

Looked at in another way, the data on value added show that in 1972, timber increased in value nearly 17 times between the stump and delivery of finished timber-based products to final consumers (fig. 18). On the average, to each \$1 worth of stumpage cut, another \$1.10 was added in harvesting, \$3.10 in primary manufacturing, \$4.40 in secondary manufacturing, \$4.20 in construction, and \$3.20 in transportation and marketing. In 1967, the total increase was almost \$21 and in 1963 about \$19.50.

Figure 18

Timber-Based Value Added per Dollar of Stumpage Cut, by Activity, 1972



Geographically, about 40 percent of the value added attributed to timber in 1972 was in the North, 35 percent in the South and 25 percent in the West. California, in the West, led all the States in total value added; followed by New York in the North; and Oregon and Washington, also in the West (table 42). Pennsylvania was second to New York in the North. Texas, North Carolina, and Georgia had the highest totals for the southern States.

Among the various activities, value added in timber management and harvesting was highest in the West; in primary manufacturing in the South; and in secondary manufacturing, construction, and transportation and marketing in the North.

One of every 25 workers employed in timber-based economic activity

Employment (full-time equivalent) in all timber-based economic activities amounted to 3.3 million people in 1972 (tables A-43 and A-44). This represented about 4.0 percent of the total civilian employment in the United States in 1972 and means that about 1 out of every 25 people employed was engaged in some kind of timber-based economic activity (fig. 19). In 1963, the employment attributed to timber was 3.1 million, about 4.5 percent of total civilian employment.

Figure 19

Employment Originating in Timber-Based Activities, 1972 and 1963

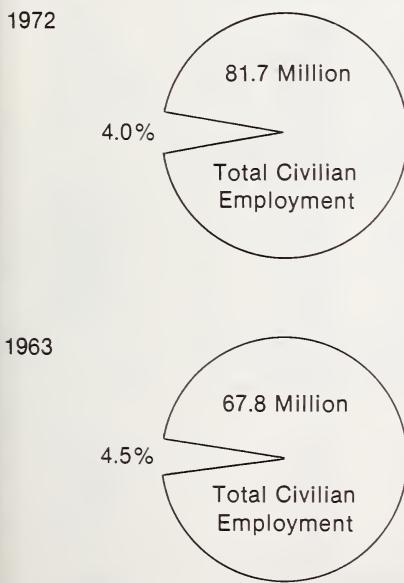
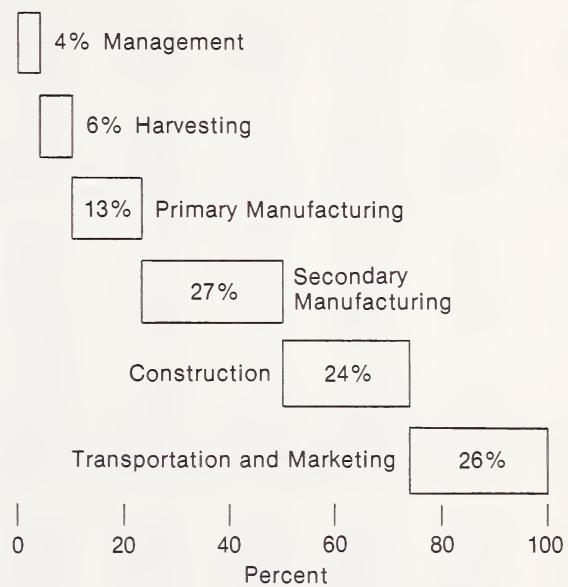


Figure 20

Timber-Based Employment, by Activity, 1972



marketing. These data on employment attributed to timber show that for each worker employed in management and harvesting, four were employed in primary and secondary manufacturing and five in construction, transportation, and marketing.

In 1972, 42 percent of the total employment attributed to timber was in the North, 39 percent in the South, and 19 percent in the West. California had the largest State timber-based employment followed by New York, Pennsylvania, Texas, and North Carolina. The South led all other sections of the Nation in employment in timber management, harvesting, and primary manufacturing, while the North had the highest number employed in secondary manufacturing, construction and transportation and trade.

Some 4 percent of the employment attributed to timber was in timber management (fig. 20). An additional 6 percent was in harvesting, 13 percent in primary manufacturing, 27 percent in secondary manufacturing, 24 percent in construction, and 26 percent in transportation and

Appendix A.

Tables

Table A-1.—Estimated volume and value of stumpage cut, value added, and value added attributed to timber in forest management in the United States, by region and State, 1972, 1967, and 1963

Region and State	1972			1967			1963		
	Volume ¹	Value of stumpage cut	Value added attributed to timber	Volume ¹	Value of stumpage cut	Value added attributed to timber	Volume ¹	Value of stumpage cut	Value added attributed to timber
	Thousand cubic feet	Thousand dollars	Thousand dollars	Thousand cubic feet	Thousand dollars	Thousand dollars	Thousand cubic feet	Thousand dollars	Thousand dollars
North:									
Northeast:									
Maine	310,200	24,550	24,550	339,250	18,900	18,900	241,400	13,350	13,350
New Hampshire	50,750	5,800	5,800	42,600	2,900	2,900	43,050	3,150	3,150
Vermont	42,050	4,950	4,950	39,400	3,250	3,250	49,700	4,650	4,650
Massachusetts	14,250	2,450	2,450	31,650	2,200	2,200	26,550	1,850	1,850
Rhode Island	1,600	—	—	1,850	—	—	3,400	—	—
Connecticut	6,000	850	850	11,900	750	750	19,450	1,050	1,050
New York	95,550	11,250	11,250	133,400	10,750	10,750	159,200	11,600	11,600
New Jersey	11,900	1,150	1,150	45,900	3,500	3,500	33,300	2,450	2,450
Pennsylvania	138,500	14,850	14,850	166,300	10,550	10,550	204,850	14,200	14,200
Total	670,800	66,050	66,050	812,250	52,900	52,900	780,900	52,500	52,500
North Central:									
Ohio	87,450	19,850	19,850	104,000	14,000	14,000	90,200	12,150	12,150
Indiana	45,000	8,250	8,250	58,750	7,150	7,150	49,450	5,450	5,450
Illinois	38,450	6,600	6,600	82,550	10,600	10,600	44,650	5,250	5,250
Michigan	201,000	21,100	21,100	197,700	15,200	15,200	215,650	14,150	14,150
Wisconsin	194,650	21,750	21,750	181,400	14,250	14,250	201,550	12,400	12,400
Minnesota	143,750	14,700	14,700	151,050	13,200	13,200	190,450	14,900	14,900
Iowa	22,900	3,200	3,200	20,950	1,650	1,650	22,250	1,650	1,650
Missouri	90,250	13,850	13,850	100,800	10,750	10,750	111,450	10,450	10,450
North Dakota	900	—	—	1,400	—	—	1,500	—	—
South Dakota	14,050	1,000	1,000	17,450	800	800	7,450	—	—
Nebraska	6,100	1,100	1,100	9,700	800	800	8,150	600	600
Kansas	11,050	1,350	1,350	8,600	700	700	8,300	550	550
Total	855,550	112,850	112,850	934,350	89,200	89,200	951,050	77,750	77,750
Total, North	1,526,350	178,900	178,900	1,746,600	142,100	142,100	1,731,950	130,250	130,250
South:									
Southeast:									
Delaware	8,900	1,300	1,300	13,650	950	950	9,750	1,000	1,000
Maryland	48,250	9,900	9,900	46,700	5,500	5,500	63,500	7,100	7,100
Virginia	283,350	49,400	49,400	292,950	32,950	32,950	396,400	41,050	41,050
West Virginia	92,800	13,500	13,500	125,300	10,000	10,000	144,650	9,750	9,750
North Carolina	462,050	86,050	86,050	434,700	49,950	49,950	420,850	45,800	45,800
South Carolina	374,850	72,050	72,050	400,800	48,600	48,600	283,900	28,900	28,900
Georgia	732,200	129,750	129,750	644,100	72,400	72,400	579,900	60,750	60,750
Florida	273,250	45,000	45,000	254,550	29,500	29,500	228,150	23,850	23,850
Total	2,275,650	406,950	406,950	2,212,750	249,850	249,850	2,127,100	218,200	218,200
South Central:									
Kentucky	114,800	15,900	15,900	110,000	10,150	10,150	155,200	12,150	12,150
Tennessee	155,000	20,400	20,400	162,350	14,150	14,150	179,800	12,050	12,050
Alabama	801,800	123,050	123,050	711,200	65,150	65,150	483,150	40,150	40,150
Mississippi	610,900	95,250	95,250	483,650	44,850	44,850	371,250	30,000	30,000
Arkansas	540,400	93,500	93,500	466,400	47,450	47,450	425,250	38,100	38,100
Louisiana	642,400	114,150	114,150	531,750	58,150	58,150	381,050	33,250	33,250
Oklahoma	64,400	10,700	10,700	35,300	3,100	3,100	53,850	3,900	3,900
Texas	424,350	81,200	81,200	311,600	33,800	33,800	293,300	29,350	29,350
Total	3,354,050	554,150	554,150	2,812,250	276,800	276,800	2,342,850	198,950	198,950
Total, South	5,629,700	961,100	961,100	5,025,000	526,650	526,650	4,469,950	417,150	417,150
West:									
Mountain:									
Montana	280,300	62,750	62,750	274,400	24,750	24,750	201,900	13,700	13,700
Idaho	320,100	84,900	84,900	310,650	34,050	34,050	255,200	21,100	21,100
Wyoming	44,300	5,500	5,500	33,650	3,650	3,650	19,250	1,150	1,150
Colorado	38,650	3,050	3,050	34,750	2,200	2,200	39,600	2,000	2,000
New Mexico	49,350	4,550	4,550	41,050	2,950	2,950	42,350	2,700	2,700
Arizona	87,450	13,350	13,350	95,150	11,200	11,200	66,250	6,600	6,600
Utah	9,850	900	900	10,950	750	750	13,500	750	750
Nevada	2,800	—	—	5,550	—	—	5,900	—	—
Total	833,000	175,100	175,100	806,150	79,800	79,800	643,950	48,250	48,250
Pacific:									
Washington	1,266,450	469,800	469,800	1,123,750	206,350	206,350	975,600	165,500	165,500
Oregon	1,679,150	739,850	739,850	1,624,450	367,550	367,550	1,855,550	413,800	413,800
California	871,500	319,850	319,850	716,750	140,400	140,400	825,700	155,900	155,900
Alaska	75,550	19,100	19,100	58,850	6,800	6,800	70,500	5,500	5,500
Hawaii	—	—	—	900	—	—	500	—	—
Total	3,892,650	1,548,600	1,548,600	3,524,700	721,150	721,150	3,727,850	740,750	740,750
Total, West	4,725,650	1,723,700	1,723,700	4,330,850	800,950	800,950	4,371,800	789,000	789,000
Total, United States	11,881,700	2,863,700	2,863,700	11,102,450	1,469,700	1,469,700	10,573,700	1,336,400	1,336,400

Table A-2—Estimated employment in timber management in the United States, by region and State, 1972, 1967, and 1963

(Number)							
Region and State	1972	1967	1963	Region and State	1972	1967	1963
North:				South Central:			
Northeast:				Kentucky	2,250	1,950	1,700
Maine	3,250	2,850	2,550	Tennessee	3,000	2,800	2,500
New Hampshire	800	750	700	Alabama	3,800	3,450	3,200
Vermont	750	650	600	Mississippi	3,900	3,550	3,450
Massachusetts	900	900	900	Arkansas	3,400	3,350	3,450
Rhode Island				Louisiana	3,600	3,300	3,050
Connecticut				Oklahoma	900	800	800
New York	2,600	2,400	2,050	Texas	2,550	2,300	2,150
New Jersey	600	500		Total	23,400	21,500	20,300
Pennsylvania	2,850	2,600	2,400	Total, South	48,700	44,200	40,950
Total	12,400	11,300	10,250				
North Central:				West:			
Ohio	1,400	1,300	1,200	Mountain:			
Indiana	550	550	550	Montana	3,400	3,050	2,400
Illinois	1,700	1,600	1,550	Idaho	2,450	2,850	1,850
Michigan	2,900	2,700	2,500	Wyoming	500		
Wisconsin	3,050	2,700	2,500	Colorado	1,600	1,250	1,100
Minnesota	1,850	1,800	1,700	New Mexico	950	1,150	750
Iowa				Arizona	1,050	850	650
Missouri	2,100	1,950	1,850	Utah	1,250	1,000	900
North Dakota				Nevada			
South Dakota	600			Total	11,650	10,850	8,250
Nebraska							
Kansas				Pacific:			
Total	15,300	14,250	13,000	Washington	5,600	5,250	4,554
Total, North	27,700	25,550	23,250	Oregon	7,800	8,300	6,100
South:				California	13,550	12,850	11,200
Southeast:				Alaska	1,950		
Delaware				Hawaii			
Maryland	1,000	900	800	Total	29,150	27,050	22,250
Virginia	3,500	3,100	2,800	Total, West	40,800	37,900	30,500
West Virginia	1,700	1,500	1,350	Total, United States	117,200	107,650	94,700
North Carolina	4,350	3,850	3,450				
South Carolina	2,950	2,700	2,550				
Georgia	6,650	6,000	5,500				
Florida	5,100	4,550	4,050				
Total	25,300	22,700	20,650				

Less than 500 employees.

Note: Estimates of the number of temporary employees and forest landowners engaged in timber management activities have been converted to a full-time basis. No direct data are available on the number of professional foresters employed; however, information from the *Journal of Forestry*, the *Economic Importance of Timber in the United States* and other sources indicate that about 20,000 of the total 117,200 persons employed in 1972 were professional foresters.

Sources: Estimates of the full-time equivalent of the number of employees engaged in timber management activities were derived from data published in the U.S. Department of Commerce, Bureau of the Census, 1960 and 1970 Censuses of Population, the *Journal of Forestry*, the *Economic Importance of Timber in the United States* and from data in personnel and administrative records of the Bureau of Land Management, U.S. Department of the Interior, and the Forest Service, U.S. Department of Agriculture.

Footnotes for Table A-1.

¹ Timber products cut from roundwood.

² Less than 500 thousand dollars.

³ Less than 500 thousand cubic feet.

Source: *Volume*—Estimates based on data published by the U.S. Department of Commerce, Bureau of Census in the 1963, 1967, and 1972 Censuses of Manufacturers, annual issues of Bureau of the Census Current Industrial Reports Series for timber products, and data collected by the Forest Service as part of surveys of timber products output by State. *Value*—Estimates derived from the calculated volumes and estimates stumpage prices based on prices received for National Forest timber, data contained in various State reports on forest product prices, and price data collected by the Forest Service. Value added and value added attributed to timber are assumed to equal value of stumpage cut.

Table A-3.—Estimated volume of round timber products harvested in the United States, by major product, region, and State, 1972, 1967, and 1963.

Region and State	1972						1967						1963					
	Total	Saw logs	Vener logs	Pulpwood	Other products ¹	Total	Saw logs	Vener logs	Pulpwood	Other products ¹	Total	Saw logs	Veneer logs	Pulpwood	Veneer logs	Pulpwood	Other products ¹	
North:																		
Maine	310,200	84,200	6,100	200,400	19,500	339,250	72,700	6,400	238,250	21,900	241,400	45,550	7,800	172,050	16,000			
New Hampshire	50,750	30,350	350	17,050	2,900	42,600	16,900	1,000	4,900	4,900	40,400	43,050	1,150	14,400	7,100			
Vermont	42,050	19,700	1,100	11,500	9,700	39,400	19,200	1,800	10,700	7,700	49,700	27,700	1,800	12,450	7,750			
Massachusetts	14,250	12,250	150	1,200	650	31,650	13,750	300	1,750	15,850	26,550	12,300	200	2,050	12,000			
Rhode Island	1,680	700	,	400	500	1,850	650	,	650	700	3,400	1,050	,	650	1,700			
Connecticut	6,000	3,350	,	750	1,800	11,900	3,200	50	1,150	7,500	19,450	3,600	50	1,250	14,550			
New York	49,550	43,600	2,100	33,200	16,650	133,400	50,000	3,450	42,350	49,000	159,200	27,500	30	33,350	74,100			
New Jersey	11,900	4,650	100	2,300	4,850	45,900	13,900	200	3,800	28,000	33,300	4,600	200	4,900	23,600			
Pennsylvania	138,500	69,900	1,950	46,500	20,150	166,300	67,650	2,100	52,050	44,500	204,850	87,400	3,050	40,050	73,450			
Total	670,800	268,950	11,850	313,300	76,700	812,250	263,850	15,300	359,700	173,400	780,900	251,600	17,000	282,050	230,250			
North Central:																		
Ohio	87,450	50,850	1,100	18,450	17,050	104,000	61,550	1,050	22,200	19,200	90,200	52,500	1,300	17,800	18,600			
Indiana	45,000	29,600	1,800	6,100	7,500	58,750	21,50	5,450	13,700	49,450	44,650	25,100	2,500	5,950	15,900			
Illinois	38,450	24,600	800	4,600	8,950	82,550	27,600	1,050	5,450	48,450	39,950	21,550	1,400	7,650	11,600			
Michigan	201,000	67,360	2,500	99,400	31,300	197,700	51,700	3,200	100,850	103,100	29,100	58,050	19,150	2,150	59,100			
Wisconsin	194,650	49,800	3,150	111,900	29,800	181,400	45,100	3,700	25,750	900	92,300	32,100	1,300	18,550	70,350			
Iowa	143,750	21,950	600	100,000	21,200	151,050	21,000	21,000	6,950	950	100,450	22,250	6,150	1,350	56,800			
Missouri	90,250	39,850	700	4,050	45,650	100,800	50,450	900	1,650	47,800	111,450	40,250	900	1,660	68,700			
North Dakota	900	200	,	700	1,400	3,650	1,7450	1,400	3,650	1,7450	1,400	1,100	100	,	1,400			
South Dakota	14,050	6,850	,	3,550	1,550	5,700	5,250	100	,	4,350	7,050	5,050	50	50	2,650	4,700		
Nebraska	6,100	4,150	300	1,00	1,550	8,600	3,150	450	,	5,000	8,300	5,950	50	50	4,850	5,500		
Kansas	11,050	24,50	450	3,400	4,750	24,400	9,34,350	324,000	14,450	336,750	259,150	951,050	297,300	15,750	305,850	332,150		
Total	855,550	306,600	12,550	354,000	182,400	934,000	259,100	1,746,600	587,850	297,50	606,450	412,550	1,731,950	548,900	32,750	587,900	562,400	
Total, North	1,526,350	575,550	24,400	667,300	259,100	1,746,600	587,850	1,050	297,50	606,450	412,550	1,731,950	548,900	32,750	587,900	562,400		
South:																		
Southeast:																		
Delaware	8,900	2,660	1,150	3,550	1,600	11,650	1,900	1,250	7,250	3,250	9,750	4,400	900	1,900	2,550			
Maryland	48,250	29,450	4,250	11,400	3,150	46,700	21,750	4,050	14,250	6,650	63,300	36,850	3,600	11,050	12,000			
Virginia	283,350	108,150	18,480	121,900	32,900	292,950	112,800	12,400	24,050	27,250	140,500	124,000	180,300	132,000	6,900	132,000	77,200	
West Virginia	92,800	60,900	700	14,100	17,100	125,300	60,950	1,000	24,650	38,700	144,650	66,900	1,050	23,150	53,550			
North Carolina	462,050	167,100	34,050	224,350	22,500	36,550	43,400	700	181,000	181,000	420,850	169,950	1,40,550	171,350	89,000			
South Carolina	374,850	122,650	25,500	188,500	38,150	40,800	154,200	13,000	174,100	59,500	283,900	128,900	12,800	150,050	49,100			
Georgia	712,200	217,900	30,700	444,250	39,350	644,100	178,650	20,700	401,500	43,250	579,900	166,350	12,900	350,900	43,050			
Florida	273,250	36,550	15,400	214,300	7,000	254,550	30,650	13,000	191,550	22,150	24,100	12,950	16,700	24,400	16,700			
Total	2,275,650	745,300	130,200	1,224,350	175,800	2,21,750	719,150	90,050	1,134,800	268,750	2,127,100	720,800	79,150	976,300	350,850			
South Central:																		
Kentucky	114,800	68,650	900	13,100	32,150	110,000	69,650	1,300	7,000	32,050	155,200	96,650	1,700	5,550	51,300			
Tennessee	155,000	85,650	1,450	36,250	31,450	162,350	71,200	211,300	33,250	386,150	80,500	40,000	1,900	30,400	53,600			
Alabama	801,800	233,300	59,750	440,500	68,250	286,000	48,1650	173,900	33,500	189,150	87,100	371,250	139,400	11,100	228,850	74,050		
Mississippi	610,900	242,200	61,400	171,300	112,100	255,550	466,400	232,850	39,500	117,750	76,300	425,250	221,950	10,000	131,000	92,950		
Arkansas	540,400	233,950	112,100	27,900	6,950	25,050	531,750	249,300	69,750	165,450	47,250	381,050	149,500	100	44,300	95,100		
Louisiana	64,400	42,430	15,3,300	177,300	22,400	311,600	129,850	28,250	113,900	39,600	293,300	146,150	6,550	80,700	59,900			
Texas	3,354,050	1,234,550	376,800	1,404,250	338,450	2,812,250	1,175,300	207,450	1,011,250	418,250	2,342,850	1,060,500	41,200	732,200	508,950			
Total, South	\$,629,700	1,979,850	507,000	2,628,600	514,250	5,025,000	1,894,450	297,500	2,146,050	687,000	4,469,950	1,781,300	120,350	1,706,500	859,800			

See footnotes at end of table.

Table A3.—Estimated volume of round timber products harvested in the United States, by major product, region, and State, 1972, 1967, and 1963—Continued

Region and State	1972				1967				1963			
	Total	Saw logs	Veneer logs	Pulpwood	Total	Saw logs	Veneer logs	Pulpwood	Total	Saw logs	Veneer logs	Pulpwood
West:												
Mountain:												
Montana	280,300	222,000	39,100	12,650	6,550	274,400	214,350	33,200	18,700	8,150	201,900	168,050
Idaho	320,100	233,250	42,400	14,100	10,350	310,650	231,900	46,750	21,150	10,050	253,000	236,150
Wyoming	44,300	35,650	6,350	700	1,400	33,650	25,150	5,950	1,200	1,350	19,250	18,150
Colorado	38,650	31,450	3,550	100	7,100	34,750	31,900	,	150	2,700	39,680	34,900
New Mexico	49,550	37,950	2	1,350	10,250	41,050	29,050	,	1,800	10,200	42,350	32,300
Arizona	87,450	64,550	2	5,100	17,800	95,150	70,050	7,500	16,600	66,250	51,050	10,050
Utah	9,850	8,550	2	1,300	10,950	9,600	,	1,350	1,350	12,350	7,250	1,750
Nevada	2,800	1,900	2	250	650	5,550	4,200	,	350	1,000	5,900	5,500
Total	833,000	655,300	88,050	34,250	53,400	806,150	616,200	85,900	50,850	53,200	643,950	560,450
Pacific:												
Washington	1,266,350	895,700	153,900	63,650	1,123,750	732,700	112,500	195,950	62,600	975,000	591,150	102,400
Oregon	1,679,050	1,004,150	539,200	98,300	31,200	1,624,450	971,150	479,500	133,850	39,350	1,853,550	1,198,600
California	871,400	737,200	37,000	20,200	716,750	582,100	72,850	48,000	13,800	825,700	722,550	71,850
Alaska	75,500	50,000	2	25,500	,	58,850	23,350	,	35,500	70,500	11,350	4,050
Hawaii	350	350	2	150	,	200	900	,	900	500	250	59,150
Total	3,892,650	2,687,050	770,250	314,100	121,250	3,524,700	2,329,300	664,850	413,300	117,250	3,727,850	2,523,900
Total, West	4,725,650	3,342,350	858,300	348,150	176,650	4,330,850	2,945,500	750,750	464,150	170,450	4,371,800	3,084,350
Total, United States	11,881,700	5,897,750	1,389,700	3,644,250	556,000	11,102,450	5,427,800	1,078,000	3,306,650	1,290,000	10,573,700	5,414,550

¹ Includes products such as poles and piling, fence posts, mine timbers, cooperage logs, and logs and bolts used for shingles, excisor, and a wide assortment of other wood items.

² Less than 25 thousand cubic feet.

Sources: Estimates based on data published by the U.S. Department of Commerce, Bureau of the Census in the 1963, 1967, and 1972 *Censuses of Manufactures*, annual issues of Bureau of the Census Current Industrial Reports series for timber products, and data collected by the Forest Service as a part of surveys of timber products output by State.

Table A-4.—Estimated value¹ of timber products harvested in the United States, by major product region and State, 1972, 1967 and 1963
(Thousand dollars)

Region and State	1972			1967			1963			
	Total	Saw logs	Veneer logs	Pulpwood	Other products ²	Total	Saw logs	Veneer logs	Pulpwood	Other products ²
North:										
Maine	99,490	35,450	4,250	56,250	3,450	86,300	19,250	2,850	58,150	6,050
New Hampshire	19,300	13,900	—	4,100	1,050	10,900	4,950	—	4,200	1,300
Vermont	15,450	8,800	800	2,900	2,950	11,000	5,200	800	2,350	6,450
Massachusetts	6,900	5,900	—	—	550	9,050	3,700	—	—	800
Rhode Island	650	—	—	—	—	—	—	—	4,750	7,300
Connecticut	3,250	1,850	—	—	—	—	—	—	—	—
New York	39,200	21,200	1,400	8,400	2,50	3,700	900	—	—	5,300
New Jersey	4,550	2,050	—	550	1,900	14,000	16,650	1,650	1,650	1,000
Pennsylvania	59,300	32,500	1,350	13,050	12,600	49,500	18,400	3,850	9,500	14,500
Total	248,200	122,000	8,200	85,850	32,150	224,650	73,050	6,950	85,950	58,700
North Central:										
Ohio	40,250	23,700	1,650	4,250	10,650	30,350	18,300	800	4,700	6,550
Indiana	24,750	15,700	2,500	1,400	5,150	22,100	11,200	1,800	1,200	7,900
Illinois	17,800	12,800	900	950	3,150	20,100	8,300	750	1,100	9,950
Michigan	81,850	33,700	1,900	26,500	19,750	63,600	17,650	1,750	25,600	18,600
Wisconsin	76,350	24,700	2,750	26,400	22,500	57,950	14,850	2,300	22,350	18,450
Minnesota	52,900	10,900	—	27,700	13,850	50,300	8,500	—	24,800	16,650
Iowa	9,500	4,800	1,250	500	2,900	6,100	2,100	650	500	14,150
Missouri	33,800	20,050	—	750	900	12,100	26,600	14,150	600	11,500
North Dakota	—	—	—	—	—	—	—	—	26,600	10,450
South Dakota	4,250	2,350	—	—	950	750	3,700	1,450	950	1,300
Nebraska	2,900	2,150	—	—	—	2,700	1,400	—	1,200	2,350
Kansas	4,000	1,350	550	800	1,300	2,350	950	—	—	1,100
Total	348,800	152,450	13,050	90,450	92,850	286,200	98,900	9,400	81,550	96,350
Total, North	597,000	274,450	21,250	176,300	125,000	510,850	171,950	16,350	167,500	155,050
South:										
Southeast:										
Delaware	3,900	1,300	1,050	1,100	—	4,100	500	550	1,900	1,150
Maryland	24,450	14,850	3,850	4,300	1,450	14,950	6,150	2,050	5,550	2,200
Virginia	116,900	57,600	15,000	34,350	8,750	79,700	33,750	5,950	32,200	33,400
West Virginia	36,100	27,850	—	28,50	4,750	32,200	17,150	600	4,500	9,950
North Carolina	199,400	95,050	27,800	63,850	12,700	122,500	48,000	10,750	43,650	20,100
South Carolina	159,200	117,650	23,200	54,500	9,850	110,500	47,350	6,200	42,650	14,300
Georgia	104,950	111,400	22,350	134,200	17,000	185,050	55,200	14,000	102,800	19,300
Florida	104,450	22,350	13,050	66,400	2,650	71,000	9,450	5,550	50,300	5,700
Total	949,350	422,050	107,750	361,950	57,600	620,000	217,550	39,400	283,750	79,300
South Central:										
Kentucky	41,850	30,050	750	2,750	8,300	28,250	18,800	650	1,200	7,600
Tennessee	54,500	35,750	1,100	9,350	8,300	39,450	23,650	—	600	5,700
Alabama	298,750	317,000	122,800	115,800	22,450	174,050	57,550	10,850	83,200	22,450
Mississippi	225,700	100,250	33,350	72,650	19,450	116,600	47,050	9,250	20,900	39,400
Arkansas	216,850	120,000	44,300	32,850	19,700	62,400	11,050	—	24,900	9,700
Louisiana	262,200	126,450	60,600	60,600	14,550	137,750	68,350	22,350	32,950	14,100
Oklahoma	25,150	13,900	3,600	5,950	1,700	8,750	4,000	—	1,000	3,550
Texas	178,300	83,200	43,550	45,800	5,750	78,300	35,950	8,800	24,050	9,300
Total	1,303,300	632,400	213,500	357,200	100,200	702,950	317,750	63,750	212,400	109,050
Total, South	2,252,650	1,054,450	321,250	719,150	157,800	1,322,950	535,300	103,150	496,150	188,350

See footnotes at end of table.

Table A-4.—Estimated value¹ of timber products harvested in the United States, by major product region and State, 1972, 1967 and 1963
(Thousand dollars)

Region and State	1972			1967			1963			
	Total	Saw logs	Veneer logs	Pulpwood	Other products ²	Total	Saw logs	Veneer logs	Pulpwood	Other products ³
South:										
Delaware	3,900	1,300	1,050	1,100	— ⁴	4,100	500	550	1,900	1,450
Maryland	24,450	14,850	3,850	4,300	1,450	14,950	6,150	2,050	4,550	2,200
Virginia	116,900	57,600	15,800	34,750	8,750	79,700	33,750	5,950	33,450	9,300
West Virginia	36,100	27,850	650	2,850	4,750	32,200	17,150	600	4,500	16,750
North Carolina	159,400	95,050	27,800	63,350	12,700	122,500	48,000	10,750	43,650	20,100
South Carolina	159,700	71,650	23,350	54,300	19,700	116,500	47,350	6,200	42,650	14,300
Georgia	304,950	131,400	22,350	13,200	17,000	185,050	55,200	7,750	102,800	31,700
Florida	104,450	22,350	13,050	66,400	2,650	71,000	9,450	5,550	50,300	56,900
Total	949,350	422,050	107,750	361,950	57,600	620,000	217,550	39,400	283,750	79,300
South Central:										
Kentucky	41,850	30,050	750	2,750	8,300	26,250	18,800	650	1,200	7,600
Tennessee	54,500	35,750	11,100	9,350	8,300	36,450	23,650	600	5,700	9,300
Alabama	298,500	122,800	37,700	115,700	22,450	174,050	57,550	10,850	22,450	8,300
Mississippi	225,700	100,250	33,350	72,650	19,450	116,600	47,050	9,250	39,400	10,750
Arkansas	216,850	120,000	32,850	44,300	19,700	119,800	62,400	11,050	21,450	9,300
Louisiana	262,200	126,450	60,600	14,550	13,750	68,350	22,350	9,250	19,700	12,300
Oklahoma	25,150	13,900	6,600	5,950	1,700	8,750	4,000	— ⁵	14,100	8,750
Texas	178,300	83,200	43,550	45,800	5,750	78,300	35,950	8,800	24,050	9,500
Total	1,103,300	632,400	213,500	357,200	702,950	317,750	63,750	212,400	109,050	524,000
Total, South										
2,252,650	1,054,450	321,250	719,150	157,800	1,322,950	515,300	103,150	496,150	188,350	1,057,600
West:										
Mountain:										
Montana	171,700	137,250	29,750	2,700	2,000	94,650	74,400	14,800	2,850	2,600
Idaho	184,900	143,450	35,500	3,050	2,900	111,650	79,650	25,800	3,250	2,050
Wyoming	21,200	16,500	4,250	— ⁴	— ⁴	9,600	6,850	2,300	— ⁴	800
Colorado	16,300	14,650	— ⁴	— ⁴	1,600	9,700	9,100	— ⁴	550	— ⁴
New Mexico	23,950	21,450	— ⁴	— ⁴	2,200	17,900	10,700	— ⁴	1,900	1,350
Arizona	41,400	36,600	— ⁴	— ⁴	950	3,850	24,300	— ⁴	3,100	12,250
Utah	4,650	4,400	— ⁴	— ⁴	— ⁴	3,150	2,900	— ⁴	1,000	1,600
Nevada	1,050	900	— ⁴	— ⁴	— ⁴	1,650	1,400	— ⁴	2,150	900
Total	465,150	375,200	69,500	7,250	13,200	271,700	209,300	42,900	7,700	11,800
Pacific:										
Washington	940,650	687,000	179,750	45,150	28,750	424,700	285,400	70,550	39,900	285,050
Oregon	1,435,700	764,300	626,700	29,700	15,000	716,900	371,650	303,000	28,850	13,450
California	630,950	528,050	84,050	11,100	7,750	278,450	217,600	45,100	5,350	4,550
Hawaii	38,050	33,050	— ⁴	5,000	— ⁴	13,750	8,800	— ⁴	4,950	7,750
Total	3,045,600	2,012,400	890,700	90,950	51,550	1,434,000	833,450	418,650	84,000	47,900
Total, West										
3,510,750	2,387,600	960,200	98,200	64,750	1,705,700	1,092,750	461,550	91,700	59,700	1,671,800
Total, United States	6,360,400	3,716,500	1,302,700	993,650	347,750	3,539,500	1,800,00	581,050	755,350	403,100
										3,219,800
										1,713,600
										498,500
										539,300
										468,400

¹ Value at local points of delivery.

² Includes products such as poles and piling, fence posts, mine timbers, cooperage logs; logs and bolts used for shingles, excisor, and a wide assortment of other wood items: Christmas trees; maple sap; and pine gum.

³ Less than 500 thousand dollars.

Sources: Estimates based on the volumes shown in Table A-3 and estimated delivered values contained in various State reports on forest product prices and price data collected by the Forest Service.

Table A-5.—Estimated value¹ of timber products harvested, value added, and value added attributed to timber in harvesting in the United States, by region and State, 1972, 1967, and 1963

(Thousand dollars)

Region and State	1972			1967			1963		
	Value	Value added	Value added attributed to timber	Value	Value added	Value added attributed to timber	Value	Value added	Value added attributed to timber
North:									
Northeast:									
Maine	99,400	44,400	44,400	86,300	40,900	40,900	59,300	24,350	24,350
New Hampshire	19,300	6,700	6,700	10,900	4,450	4,450	11,750	3,050	3,050
Vermont	15,450	6,550	6,550	11,000	6,050	6,050	14,450	7,100	7,100
Massachusetts	6,900	2,950	2,950	9,250	4,250	4,250	7,300	2,850	2,850
Rhode Island	650	²	²	²	²	²	800	²	²
Connecticut	3,250	1,350	1,350	3,700	1,700	1,700	5,300	2,050	2,050
New York	39,200	20,450	20,450	39,750	21,150	21,150	46,450	27,800	27,800
New Jersey	4,550	3,150	3,150	14,000	7,600	7,600	10,650	5,700	5,700
Pennsylvania	59,500	32,200	32,200	49,500	27,200	27,200	60,600	29,300	29,300
Total	248,200	118,000	118,000	224,650	113,550	113,550	216,600	102,500	102,500
North Central:									
Ohio	40,250	18,200	18,200	30,350	15,400	15,400	24,150	12,100	12,100
Indiana	24,750	12,250	12,250	22,100	11,350	11,350	17,150	8,500	8,500
Illinois	17,800	8,850	8,850	20,100	8,800	8,800	12,650	6,350	6,350
Michigan	81,850	42,800	42,800	63,600	37,750	35,750	61,600	34,240	34,240
Wisconsin	76,350	37,100	37,100	57,950	27,800	27,800	60,300	28,650	28,650
Minnesota	52,900	25,700	25,700	50,300	24,150	24,150	59,200	25,550	25,550
Iowa	9,500	4,850	4,850	6,100	2,850	2,850	6,150	3,950	3,950
Missouri	33,800	17,100	17,100	26,600	12,450	12,450	26,600	16,950	16,950
North Dakota	²	²	²	²	²	²	²	²	²
South Dakota	4,250	2,200	2,200	3,700	1,750	1,750	1,350	500	500
Nebraska	2,900	1,500	1,500	2,700	1,300	1,300	2,350	850	850
Kansas	4,000	2,050	2,050	2,350	1,100	1,100	1,950	700	700
Total	348,800	172,850	172,850	286,200	142,850	142,850	273,800	138,550	138,550
Total, North	597,000	290,850	290,850	510,850	256,400	256,400	490,400	241,050	241,050
South:									
Southeast:									
Delaware	3,900	1,950	1,950	4,100	2,600	2,600	2,900	1,400	1,400
Maryland	24,450	11,950	11,950	14,950	9,450	9,450	17,000	9,300	9,300
Virginia	116,900	58,800	58,800	79,700	42,900	42,900	93,600	51,050	51,050
West Virginia	36,100	17,050	17,050	32,200	18,200	18,200	34,000	15,450	15,450
North Carolina	199,400	91,500	91,500	122,500	69,250	69,250	104,700	50,100	50,100
South Carolina	159,200	86,600	86,600	110,500	58,650	58,650	67,750	30,950	30,950
Georgia	304,950	145,450	145,450	185,050	92,900	92,900	156,850	74,400	74,400
Florida	104,450	48,500	48,500	71,000	37,250	37,250	56,800	28,650	28,650
Total	949,350	461,800	461,800	620,000	331,200	331,200	533,600	261,300	261,300
South Central:									
Kentucky	41,850	20,400	20,400	28,250	14,700	14,700	34,950	18,200	18,200
Tennessee	54,500	26,450	26,450	39,450	18,850	18,850	38,350	18,300	18,300
Alabama	298,750	164,950	164,950	174,050	91,400	91,400	107,750	56,550	56,550
Mississippi	225,700	107,700	107,700	116,600	53,050	53,050	80,200	36,500	36,500
Arkansas	216,850	98,000	98,000	119,800	57,300	57,300	97,100	46,450	46,450
Louisiana	262,200	145,300	145,300	137,750	62,950	62,950	87,250	39,850	39,850
Oklahoma	25,150	11,500	11,500	8,750	4,100	4,100	11,850	5,550	5,550
Texas	178,300	64,900	64,900	78,300	39,400	39,400	66,550	33,450	33,450
Total	1,303,300	639,200	639,200	703,950	341,750	341,750	524,900	254,850	254,850
Total, South	2,252,650	1,101,000	1,101,000	1,322,950	672,950	672,950	1,057,600	516,150	516,150
West:									
Mountain:									
Montana	171,700	94,950	94,950	94,650	50,850	50,850	65,900	30,300	30,300
Idaho	184,900	76,900	76,900	111,650	53,300	53,300	86,050	40,800	40,800
Wyoming	21,200	11,500	11,500	9,600	5,400	5,400	4,950	2,850	2,850
Colorado	16,300	8,200	8,200	9,700	5,500	5,500	13,850	6,250	6,250
New Mexico	23,950	15,950	15,950	12,900	9,150	9,150	13,950	8,650	8,650
Arizona	41,400	28,750	28,750	28,400	19,750	19,750	19,650	9,050	9,050
Utah	4,650	2,250	2,250	3,150	1,500	1,500	3,850	1,850	1,850
Nevada	1,050	500	500	1,650	800	800	2,150	1,050	1,050
Total	465,150	239,000	239,000	271,700	146,250	146,250	207,050	100,800	100,800
Pacific:									
Washington	940,650	453,400	453,400	424,700	203,050	203,050	341,700	149,700	149,700
Oregon	1,435,700	650,350	650,350	716,900	342,700	342,700	804,550	384,600	384,600
California	630,950	312,300	312,300	278,450	131,200	131,200	306,750	134,050	134,050
Alaska	38,050	18,350	18,350	13,750	9,200	9,200	11,600	6,500	6,500
Hawaii	²	²	²	²	²	²	²	²	²
Total	3,045,600	1,434,500	1,434,500	1,434,000	686,300	686,300	1,464,750	674,950	674,950
Total, West	3,510,750	1,673,500	1,673,500	1,705,700	832,550	832,550	1,671,800	775,750	775,750
Total, United States	6,360,400	3,065,350	3,065,350	3,539,500	1,761,900	1,761,900	3,219,800	1,532,950	1,532,950

See footnotes on page 36.

Table A-6—Estimated employment in timber harvesting in the United States, by major product and region, 1972, 1967, and 1963

Region	Total employees	(Number)			
		Saw logs	Veneer logs	Pulpwood	Other
1972					
North:					
Northeast	19,350	7,750	2	8,000	3,150
North Central	25,900	8,800	2	9,050	7,600
Total	45,250	16,550	900	17,050	10,750
South:					
Southeast	40,300	11,400	2,500	19,850	6,550
South Central	57,200	18,900	7,150	22,800	8,350
Total	97,500	30,300	9,650	42,650	14,900
West:					
Mountain	8,350	5,900	1,000	2	1,000
Pacific	39,300	24,200	8,900	4,000	2,200
Total	47,650	30,100	9,900	4,450	3,200
Total, United States	190,400	76,950	20,450	64,150	28,850
1967					
North:					
Northeast	28,700	8,850	650	10,750	8,450
North Central	34,200	10,900	650	10,050	12,600
Total	62,900	19,750	1,300	20,800	21,050
South:					
Southeast	54,300	14,350	2,250	24,100	13,600
South Central	63,800	23,500	5,150	21,450	13,700
Total	118,100	37,850	7,400	45,550	27,300
West:					
Mountain	10,200	6,950	1,250	800	1,200
Pacific	45,150	26,300	9,600	6,600	2,650
Total	55,350	33,250	10,850	7,400	3,850
Total, United States	236,350	90,850	19,550	73,750	52,200
1963					
North:					
Northeast	32,700	9,600	850	9,550	12,700
North Central	40,800	11,350	750	10,400	18,300
Total	73,500	20,950	1,600	19,950	31,000
South:					
Southeast	69,350	17,850	2,450	25,650	23,400
South Central	67,650	26,250	1,250	19,250	20,900
Total	137,000	44,100	3,700	44,900	44,300
West:					
Mountain	9,400	7,550	500	350	1,000
Pacific	56,650	34,100	12,650	6,900	3,000
Total	66,050	41,650	13,150	7,250	4,000
Total, United States	276,550	106,700	18,450	72,100	79,300

¹ Includes products such as poles and piling, fence posts, mine timbers, cooperage logs, and logs and bolts used for shingles, excelsior and a wide assortment of other wood items; Christmas trees; maple sap; and pine gum.

² Less than 500 employees.

Sources: Estimates of employment in harvesting were calculated from product output data shown in table A-3 and factors derived from those in *The Economic Importance of Timber in the United States*, logging employment data from the 1960 and 1970 *Censuses of Population*, national and regional timber products output data from various Forest Service reports, and productivity estimates from the Bureau of Labor Statistics, U.S. Department of Labor.

Footnotes for Table A-5.

^a Value at local points of delivery.

^b Less than 500 thousand dollars.

Sources: *Value*—See source notes, table A-4. *Value added and value added attributed to timber*—based on the estimated number of employees in harvesting (see table A-7) and estimates of average value added per employee. Estimates of average value added per employee based on employment and value added in the “logging camps and contractors” industry (SIC 2411) published in the 1963, 1967, and 1972 *Censuses of Manufactures*. All of the value added was attributed to timber because all final products in this industry consisted of timber and related products.

Table A-7—Estimated employment in timber harvesting in the United States, by region and State, 1972, 1967, and 1963

(Number)						
Region and State	1972	1967	1963	Region and State	1972	1967
North:				South Central:		
Northeast:				Kentucky	2,050	2,600
Maine	8,600	10,900	8,850	Tennessee	2,700	3,750
New Hampshire	1,450	1,450	1,700	Alabama	13,650	16,150
Vermont	1,300	1,400	2,000	Mississippi	10,550	11,200
Massachusetts	1	1,300	1,200	Arkansas	9,200	10,550
Rhode Island	1	500	1,000	Louisiana	10,850	11,700
Connecticut	1	2,900	5,050	Oklahoma	1,100	900
New York	2,900	5,050	7,200	Texas	7,100	6,950
New Jersey	1	1,950	1,650	Total	57,200	63,800
Pennsylvania	4,100	6,100	8,900		57,200	67,650
Total	19,350	28,700	32,700	Total, South	97,500	118,110
North Central:					137,000	
Ohio	2,700	3,700	3,700	West:		
Indiana	1,400	2,200	2,150	Mountain:		
Illinois	1,200	3,500	1,900	Montana	2,750	3,400
Michigan	5,900	6,900	8,850	Idaho	3,150	3,900
Wisconsin	5,650	6,200	8,550	Wyoming	1	1
Minnesota	4,100	5,200	7,900	Colorado	1	1
Iowa	800	850	1,100	New Mexico	550	600
Missouri	3,150	4,100	5,400	Arizona	950	1,300
North Dakota	1	1	1	Utah	1	1
South Dakota	1	700	1	Nevada	1	1
Nebraska	1	1	1	Total	8,350	10,200
Kansas	1	1	1		8,350	9,400
Total	25,900	34,200	40,800	Pacific:		
Total, North	45,250	62,900	73,500	Washington	12,950	14,650
South:				Oregon	17,200	20,950
Southeast:				California	8,350	8,700
Delaware	1	1	1	Alaska	800	850
Maryland	800	1,050	1,800	Hawaii	1	1
Virginia	4,800	6,400	11,150	Total	39,300	45,150
West Virginia	1,600	3,000	4,400		39,300	56,650
North Carolina	7,700	9,850	12,000	Total, West	47,650	55,350
South Carolina	6,350	8,950	8,050		47,650	66,050
Georgia	14,150	18,600	24,350	Total, United States	190,400	236,350
Florida	4,750	6,200	7,400		190,400	276,550
Total	40,300	54,300	69,350			

¹ Less than 500 employees.

Sources: See table A-6.

Table A-8—Estimated production of lumber in the United States, by major species groups and region, 1963–72

Region and species group		(Million board feet)									
		1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
North:											
Northeast:											
Softwoods		623	673	644	655	629	645	644	609	624	624
Hardwoods		856	862	884	925	907	928	1,035	942	924	957
Total		1,479	1,535	1,528	1,580	1,536	1,573	1,679	1,551	1,548	1,581
North Central:											
Softwoods		470	369	368	383	371	423	392	384	372	384
Hardwoods		1,256	1,426	1,432	1,458	1,471	1,449	1,528	1,497	1,469	1,396
Total		1,726	1,795	1,800	1,841	1,842	1,872	1,920	1,881	1,841	1,780
Total North:											
Softwoods		1,093	1,042	1,012	1,038	1,000	1,068	1,036	993	996	1,008
Hardwoods		2,112	2,288	2,316	2,383	2,378	2,377	2,563	2,439	2,393	2,353
Total		3,205	3,330	3,328	3,421	3,378	3,445	3,599	3,432	3,389	3,361
South:											
Southeast:											
Softwoods		2,907	3,075	3,109	3,117	3,012	3,116	3,092	3,142	3,413	3,459
Hardwoods		2,334	2,072	2,141	2,258	2,192	2,132	2,114	2,087	1,985	1,960
Total		5,241	5,147	5,250	5,375	5,204	5,248	5,206	5,229	5,398	5,419
South Central:											
Softwoods		3,466	3,641	3,795	3,742	3,743	4,025	4,352	4,159	4,570	4,661
Hardwoods		2,529	2,754	2,849	2,892	2,663	2,523	2,648	2,485	2,429	2,318
Total		5,995	6,395	6,644	6,634	6,406	6,548	7,000	6,644	6,999	6,979
Total South:											
Softwoods		6,373	6,716	6,904	6,859	6,755	7,141	7,444	7,301	7,983	8,120
Hardwoods		4,863	4,826	4,990	5,150	4,855	4,655	4,762	4,572	4,414	4,278
Total		11,236	11,542	11,894	12,009	11,610	11,796	12,206	11,873	12,397	12,398
West:											
Mountain:											
Softwoods		3,702	4,038	4,116	4,149	4,154	4,528	4,361	4,098	4,441	4,378
Hardwoods		39	9	9	18	17	17	16	15	15	16
Total		3,741	4,047	4,125	4,167	4,171	4,545	4,377	4,113	4,456	4,394
Pacific:											
Softwoods		16,384	17,488	17,263	16,801	15,402	16,548	15,501	15,138	16,619	17,469
Hardwoods		140	152	152	186	180	139	141	112	127	123
Total		16,524	17,640	17,415	16,987	15,582	16,687	15,642	15,250	16,746	17,592
Total West:											
Softwoods		20,086	21,526	21,379	20,950	19,556	21,076	19,862	19,236	21,060	21,847
Hardwoods		179	161	161	204	197	156	157	127	142	139
Total		20,265	21,687	21,540	21,154	19,753	21,232	20,019	19,363	21,202	21,986
United States:											
Softwoods		27,552	29,284	29,295	28,847	27,311	29,285	28,342	27,530	30,039	30,975
Hardwoods		7,154	7,275	7,467	7,737	7,430	7,188	7,482	7,138	6,949	6,770
Total		34,706	36,559	36,762	36,584	34,741	36,473	35,824	34,668	36,988	37,745

Source: U.S. Department of Commerce, Bureau of the Census, *Lumber production and mill stocks. Curr. Indus. Reps. Ser. MA-24T.* (annual).

Table A-9—Estimated production of plywood in the United States, by major species groups and region, 1963–72

Region and species group		(Million square feet, 3/8-inch basis)									
Region	Species Group	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
North:											
Northeast:											
Softwoods		—	—	—	—	—	—	—	—	—	—
Hardwoods		177	194	211	208	172	166	162	138	139	156
Total		177	194	211	208	172	166	162	138	139	156
North Central:											
Softwoods		—	—	—	—	—	—	—	—	—	—
Hardwoods		274	310	306	325	284	281	290	272	200	234
Total		274	310	306	325	284	281	290	272	200	234
Total, North:											
Softwoods		—	—	—	—	—	—	—	—	—	—
Hardwoods		451	504	517	533	456	447	452	410	339	390
Total		451	504	517	533	456	447	452	410	339	390
South:											
Southeast:											
Softwoods		—	—	22	181	343	555	687	911	1,048	1,304
Hardwoods		555	572	603	654	616	596	594	560	609	650
Total		555	572	625	835	959	1,151	1,281	1,471	1,657	1,954
South Central:											
Softwoods		—	80	380	959	1,436	1,818	2,188	2,404	3,362	4,014
Hardwoods		201	212	257	281	230	208	178	163	204	243
Total		201	292	637	1,240	1,666	2,026	2,366	2,567	3,566	4,257
Total, South:											
Softwoods		—	80	402	1,140	1,779	2,373	2,875	3,315	4,410	5,318
Hardwoods		756	784	860	935	846	804	772	723	813	893
Total		756	864	1,262	2,075	2,625	3,177	3,647	4,038	5,223	6,211
West:											
Mountain:											
Softwoods		358	495	730	892	1,062	1,065	918	891	1,023	1,068
Hardwoods		—	—	—	—	—	—	—	—	—	—
Total		358	495	730	892	1,062	1,065	918	891	1,023	1,068
Pacific:											
Softwoods		9,858	11,103	11,315	11,022	10,116	11,257	9,901	10,071	11,202	11,937
Hardwoods		476	624	672	608	614	758	645	663	778	813
Total		10,334	11,727	11,987	11,630	10,730	12,015	10,546	10,734	11,980	12,750
Total, West:											
Softwoods		10,216	11,598	12,045	11,914	11,178	12,322	10,819	10,962	12,225	13,005
Hardwoods		476	624	672	608	614	758	645	663	778	813
Total		10,692	12,222	12,717	12,522	11,792	13,080	11,464	11,625	13,003	13,818
United States:											
Softwoods		10,216	11,679	12,447	13,045	13,054	14,695	13,694	14,277	16,635	18,323
Hardwoods		1,683	1,912	2,049	2,076	1,916	2,009	1,869	1,796	1,930	2,096
Total		11,899	13,591	14,496	15,130	14,873	16,704	15,563	16,073	18,565	20,419

Sources: *Softwood plywood*—American Plywood Association and U.S. Department of Commerce, Bureau of the Census. *Softwood Plywood*. Curr. Indus. Reps. Ser. MA-24H (annual). *Hardwood plywood*—U.S. Department of Commerce, Bureau of the Census. *Hardwood Plywood*. Curr. Indus. Reps. Ser. MA-24F (annual).

American Plywood Association data on softwood plywood production differ from those published by the Bureau of the Census as follows (all data in million square feet, 3/8-inch basis):

Year	APA	Census	Year	APA	Census
1963	10,216	10,375	1968	14,695	14,385
1964	11,679	11,455	1969	13,694	13,538
1965	12,447	12,428	1970	14,277	14,149
1966	13,054	12,847	1971	16,635	16,354
1967	12,957	12,840	1972	18,323	17,843

Table A-10—Estimated production of wood pulp in the United States, by region, 1963-72

Region	(Thousand short tons)									
	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
North:										
Northeast	3,143	3,201	3,232	3,408	3,769	3,975	4,036	3,761	3,705	3,903
North Central	3,223	3,331	3,438	3,517	3,407	3,606	3,946	3,738	3,777	3,896
Total, North	6,366	6,532	6,670	6,925	7,176	7,581	7,982	7,499	7,482	7,799
South:										
Southeast	10,647	11,473	12,183	12,995	12,828	13,808	14,388	14,088	14,086	14,731
South Central	7,241	8,238	8,473	9,381	9,294	9,990	13,043	13,783	14,445	15,644
Total, South	17,888	19,711	20,656	22,376	22,122	23,798	27,430	27,871	28,530	30,376
West:										
Mountain	569	585	621	678	751	799	804	803	805	865
Pacific	5,298	5,601	6,046	6,660	6,612	7,221	7,201	7,490	7,115	7,727
Total, West	5,868	6,186	6,667	7,339	7,362	8,020	8,004	8,293	7,921	8,592
Total, United States	310,121	32,429	33,993	36,640	36,660	39,400	43,416	43,663	43,933	46,767

Note: Data may not add to totals due to rounding.

Source: U.S. Department of Commerce, Bureau of the Census, *Pulp, paper, and board. Curr. Indus. Reps. Ser. M26A*, (annual).

**Table A-11—Estimated value of shipments from primary manufacturing industries in the United States,
by industry and region, 1972, 1967, and 1963**

Region	Total	(Thousand dollars)			
		Sawmills and planing mills	Veneer and plywood plants	Pulp, paper and paper- board mills	All other ¹
1972					
North:					
Northeast	3,016,850	383,900	73,800	2,545,050	14,100
North Central	2,157,050	446,200	170,200	2,455,350	85,300
Total	6,173,900	830,100	244,000	5,000,400	99,400
South:					
Southeast	4,470,600	1,262,000	462,100	2,503,300	243,200
South Central	4,909,500	1,693,800	499,400	2,503,300	213,000
Total	9,380,100	2,955,800	961,500	5,006,600	456,200
West:					
Mountain	800,200	641,900	110,000	32,700	15,600
Pacific	6,663,700	3,146,900	1,607,800	1,665,100	243,900
Total	7,463,900	3,788,800	1,717,800	1,697,800	259,500
Total, United States	23,107,900	7,574,700	2,923,300	11,704,800	815,100
1967					
North:					
Northeast	2,491,600	264,600	57,700	2,155,300	14,000
North Central	2,427,300	257,200	146,700	1,982,200	41,200
Total	4,918,900	521,800	204,400	4,137,500	55,200
South:					
Southeast	2,984,250	725,050	225,000	1,916,900	117,300
South Central	2,790,750	979,650	177,000	1,526,400	107,700
Total	5,775,000	1,704,700	402,000	3,443,300	225,500
West:					
Mountain	515,450	387,700	54,700	70,500	2,550
Pacific	3,811,350	1,562,900	1,026,100	1,171,400	50,950
Total	4,326,800	1,950,600	1,080,800	1,241,900	53,500
Total, United States	15,020,700	4,177,100	1,687,200	8,822,700	333,700
1963					
North:					
Northeast	2,107,950	211,600	49,500	1,834,450	12,400
North Central	1,974,700	221,550	143,250	1,577,700	32,200
Total	4,082,650	433,150	192,750	3,412,150	44,600
South:					
Southeast	2,401,500	638,800	154,350	1,494,000	114,350
South Central	2,170,050	874,700	65,550	1,131,200	98,600
Total	4,571,550	1,513,500	219,900	2,625,200	212,950
West:					
Mountain	430,500	336,050	18,150	74,700	1,600
Pacific	3,343,150	1,465,200	908,800	919,400	49,750
Total	3,773,650	1,801,250	926,950	994,100	51,350
Total, United States	12,427,850	3,747,900	1,339,600	7,031,450	308,900

**Table A-12—Estimated value of shipments from primary manufacturing industries in the United States,
by region and State, 1972, 1967, and 1963**

(Thousand dollars)							
Region and State	1972	1967	1963	Region and State	1972	1967	1963
North:				South Central:			
Northeast:				Kentucky	221,850	95,300	68,350
Maine	762,000	588,750	433,500	Tennessee	544,850	421,300	340,850
New Hampshire	166,550	144,500	119,100	Alabama	902,450	607,700	442,700
Vermont	87,800	56,850	50,900	Mississippi	737,550	324,800	261,950
Massachusetts	317,450	317,400	281,500	Arkansas	771,850	422,050	327,300
Rhode Island	12,150	6,050	4,750	Louisiana	956,850	533,750	461,700
Connecticut	107,200	89,300	74,700	Oklahoma	145,250	54,300	32,450
New York	630,950	533,850	474,950	Texas	628,850	331,550	234,750
New Jersey	258,500	242,650	223,750	Total	4,909,500	2,790,750	2,170,050
Pennsylvania	674,250	512,250	444,800	Total, South	9,380,100	5,775,000	4,571,550
Total	3,016,850	2,491,600	2,107,950				
North Central:				West:			
Ohio	625,200	488,550	393,650	Mountain:			
Indiana	193,100	163,400	142,900	Montana	226,900	171,950	114,100
Illinois	192,550	165,000	123,300	Idaho	387,100	210,850	188,400
Michigan	592,550	459,000	377,800	Wyoming	19,600	12,500	8,850
Wisconsin	1,056,650	811,050	653,550	Colorado	37,800	37,400	30,300
Minnesota	322,300	222,550	181,200	New Mexico	49,450	16,700	23,400
Iowa	35,200	26,250	22,550	Arizona	56,000	54,800	55,500
Missouri	91,950	66,800	60,550	Utah	18,400	8,100	7,450
North Dakota	3,500	750	850	Nevada	4,950	3,150	2,500
South Dakota	12,800	6,050	4,100	Total	800,200	515,450	430,500
Nebraska	2,150	2,200	1,000				
Kansas	29,100	15,700	13,250	Pacific:			
Total	3,157,050	2,427,300	1,974,700	Washington	1,979,050	1,265,500	1,097,850
Total, North	6,173,900	4,918,900	4,082,650	Oregon	2,954,600	1,585,050	1,386,650
South:				California	1,636,900	863,200	797,900
Southeast:				Alaska	92,000	96,100	57,400
Delaware	27,400	17,450	12,900	Hawaii	1,150	1,500	3,350
Maryland	202,600	125,650	89,050	Total	6,663,700	3,811,350	3,343,150
Virginia	793,550	542,150	428,900	Total, West	7,463,900	4,326,800	3,773,650
West Virginia	115,650	95,650	78,200	Total, United States	23,017,900	15,020,700	12,427,850
North Carolina	944,050	647,950	474,700				
South Carolina	584,350	365,300	303,400				
Georgia	1,172,100	737,700	615,400				
Florida	630,900	452,400	398,950				
Total	4,470,600	2,984,250	2,401,500				

Note: Industry composition and definitions are given in Appendix B.

Sources: See table A-11.

Footnote for Table A-11.

¹ Includes enterprises manufacturing particleboard, excelsior, wood shingles, cooperage, and gum and wood naval stores.

Note: Industry composition and definitions are given in Appendix B.

Sources: *Value of shipments*: U.S. Department of Commerce, Bureau of the Census. 1963, 1967, and 1972 *Censuses of Manufactures*. The sawmills and planing mills industry value of shipments were adjusted to include shipments from small eastern mills not included in the Census estimates. The value of shipments from sawmills and planing mills as reported by Census and the estimates made for this study are shown below. Estimates of value of shipments for States and regions for which no Census information was published were derived from table footnotes and trend data.

Region	1972		1967		1963	
	Census	This study	Census	This study	Census	This study
	Thousand dollars	Thousand dollars	Thousand dollars	Thousand dollars	Thousand dollars	Thousand dollars
North	718,335	830,100	455,600	521,800	378,481	433,150
South	2,535,665	2,955,800	1,473,700	1,704,700	1,321,851	1,513,500
West	3,788,800	3,788,800	1,950,600	1,950,600	1,801,240	1,801,250
Total	7,042,800	7,574,700	3,879,900	4,177,100	3,501,572	3,747,900

Table A-13—Estimated value added in primary manufacturing industries in the United States, by industry and region, 1972, 1967, and 1963

Region	Total	(Thousand dollars)			
		Sawmills and planing mills	Veneer and plywood plants	Pulp, paper and paper- board mills	All other ¹
1972					
North:					
Northeast	1,294,500	130,800	29,800	1,128,300	5,600
North Central	1,384,600	157,450	72,050	1,114,950	40,150
Total	2,679,100	288,250	101,850	2,243,250	45,750
South:					
Southeast	1,946,150	479,500	187,400	1,163,650	115,600
South Central	2,183,450	675,650	217,100	1,195,450	95,250
Total	4,129,600	1,155,150	404,500	2,359,100	210,850
West:					
Mountain	338,950	279,650	34,250	16,850	8,200
Pacific	2,921,200	1,306,300	697,800	798,100	119,000
Total	3,260,150	1,585,950	732,050	814,950	127,200
Total, United States	10,068,850	3,029,350	1,238,400	5,417,300	383,800
1967					
North:					
Northeast	1,131,550	93,050	22,850	1,009,650	6,000
North Central	1,140,150	93,800	64,600	965,050	16,900
Total	2,271,700	186,850	87,250	1,974,700	22,900
South:					
Southeast	1,408,000	277,150	89,150	985,900	55,800
South Central	1,281,250	371,850	71,850	789,450	48,100
Total	2,689,250	649,000	161,000	1,775,350	103,900
West:					
Mountain	198,100	144,900	18,850	33,200	1,150
Pacific	1,507,400	544,850	381,600	557,400	23,550
Total	1,705,500	689,750	400,450	590,600	24,700
Total, United States	6,666,450	1,325,600	648,700	4,340,650	151,500
1963					
North:					
Northeast	929,100	66,100	20,600	837,000	5,400
North Central	909,650	78,500	59,050	758,400	13,700
Total	1,838,750	144,600	79,650	1,595,400	19,100
South:					
Southeast	1,137,550	232,750	67,800	780,450	56,550
South Central	1,005,400	337,400	27,050	598,950	42,000
Total	2,142,950	570,150	94,850	1,379,400	98,550
West:					
Mountain	161,900	121,200	5,450	34,500	750
Pacific	1,306,000	483,900	348,950	449,850	23,300
Total	1,467,900	605,100	354,400	484,350	24,050
Total, United States	5,449,600	1,319,850	528,900	3,459,150	141,700

See footnotes on page 44.

Table A-14—Estimated value added in primary manufacturing industries in the United States, by region and State, 1972, 1967, and 1963

(Thousand dollars)							
Region and State	1972	1967	1963	Region and State	1972	1967	1963
North:				South Central:			
Northeast:				Kentucky	95,050	39,050	26,600
Maine	318,500	262,550	212,650	Tennessee	226,550	186,100	154,450
New Hampshire	62,650	58,700	38,200	Alabama	415,650	291,700	206,100
Vermont	35,500	22,450	16,950	Mississippi	323,700	140,800	114,100
Massachusetts	150,050	152,700	136,150	Arkansas	346,850	187,150	143,350
Rhode Island	5,450	2,950	2,400	Louisiana	435,300	254,550	229,700
Connecticut	50,550	42,500	33,900	Oklahoma	65,000	23,050	16,100
New York	268,200	232,850	194,150	Texas	275,350	158,850	115,000
New Jersey	121,450	123,300	106,700	Total	2,183,450	1,281,250	1,005,400
Pennsylvania	282,150	233,550	188,000	Total, South	4,129,600	2,689,250	2,142,950
Total	1,294,500	1,131,550	929,100				
North Central:				West:			
Ohio	272,900	252,650	194,250	Mountain:			
Indiana	87,500	72,700	62,700	Montana	97,450	65,000	42,650
Illinois	84,200	79,550	55,350	Idaho	157,650	80,650	70,900
Michigan	255,600	198,200	161,700	Wyoming	8,900	4,750	4,000
Wisconsin	465,400	382,500	307,650	Colorado	16,650	14,650	11,900
Minnesota	149,200	105,450	86,700	New Mexico	22,600	7,100	8,650
Iowa	16,650	12,550	10,400	Arizona	25,050	21,950	20,000
Missouri	33,250	25,500	22,100	Utah	8,400	2,800	2,850
North Dakota	1,300			Nevada	2,250	1,200	950
South Dakota	6,500	2,750	1,750	Total	338,950	198,100	161,900
Nebraska	950	850	450				
Kansas	11,150	7,150	6,250	Pacific:			
Total	1,384,600	1,140,150	909,650	Washington	878,800	538,100	460,450
Total, North	2,679,100	2,271,700	1,838,750	Oregon	1,282,100	596,100	521,700
South:				California	718,650	329,700	295,950
Southeast:				Alaska	41,150	42,950	26,250
Delaware	11,950	7,450	5,050	Hawaii	500	550	1,650
Maryland	90,300	61,900	43,400	Total	2,921,200	1,507,400	1,306,000
Virginia	358,300	267,400	201,350	Total, West	3,260,150	1,705,500	1,467,900
West Virginia	50,250	43,450	32,750	Total, United States	10,068,850	6,666,450	5,449,600
North Carolina	390,750	292,900	219,000				
South Carolina	249,700	167,500	137,400				
Georgia	527,250	352,750	307,600				
Florida	267,650	214,650	191,000				
Total	1,946,150	1,408,000	1,137,550				

Less than 500 thousand dollars.

Note: Industry composition and definition are given in Appendix B.

Sources: See table A-13.

Footnotes for Table A-13.

¹ Includes enterprises manufacturing particleboard, excelsior, wood shingles, cooperage, and gum and wood naval stores.

Note: Industry composition and definitions are given in Appendix B.

Sources: *Value added*: U.S. Department of Commerce, Bureau of Census, 1963, 1967, and 1972 *Censuses of Manufactures*. The sawmills and planing mills industry values added were adjusted to include the value added in small eastern mills not covered by Census estimates, and to exclude the value added in logging and woods operations conducted in combination with sawmills. The veneer and plywood and pulp, paper, and paperboard industries values added were also adjusted to exclude the value reported by Census and the comparable estimates made for this study are shown below. Estimates of values added for States and regions for which no Census information was published were derived from table footnotes and industry trend data.

Region	1972		1967		1963	
	Census	This study	Census	This study	Census	This study
	Thousand dollars					
Sawmills and planing mills						
North	317,020	288,250	225,900	186,850	173,240	144,600
South	1,110,980	1,155,150	669,900	649,000	578,861	570,150
West	1,746,300	1,585,950	837,400	689,750	779,062	605,100
Total	3,174,300	3,029,350	1,733,200	1,525,600	1,531,163	1,319,850
Veneer and plywood plants						
North	105,400	101,850	91,300	87,250	82,767	79,650
South	410,500	404,500	163,800	161,000	95,899	94,850
West	760,300	732,050	423,000	400,450	380,545	354,400
Total	1,276,200	1,238,400	678,100	648,700	559,211	528,900
Pulp, paper, and paperboard mills						
North	2,225,600	2,243,250	1,986,500	1,974,700	1,603,646	1,595,400
South	2,369,000	2,359,100	1,782,900	1,775,350	1,383,350	1,379,400
West	832,600	814,950	613,100	590,600	505,336	484,350
Total	5,457,200	5,417,300	4,382,500	4,340,650	3,492,332	3,459,150

**Table A-15—Estimated value added attributed to timber in primary manufacturing industries in the United States,
by industry and region, 1972, 1967, and 1963**

Region	Total	(Thousand dollars)				All other ¹
		Sawmills and planing mills	Veneer and plywood plants	Pulp, paper and paper- board mills		
1972						
North:						
Northeast	1,108,650	124,300	26,850	952,300		5,200
North Central	1,176,950	149,600	64,800	936,350		26,200
Total	2,285,600	273,900	91,650	1,888,650		31,400
South:						
Southeast	1,693,100	455,550	163,050	984,750		89,750
South Central	1,910,300	641,850	188,900	1,013,200		66,350
Total	3,603,400	1,097,400	351,950	1,997,950		156,100
West:						
Mountain	313,350	265,600	29,450	14,350		3,950
Pacific	2,594,600	1,239,400	600,100	682,150		72,950
Total	2,907,950	1,505,000	629,550	696,500		76,900
Total, United States	8,796,950	2,876,300	1,073,150	4,583,100		264,400
1967						
North:						
Northeast	942,650	88,400	20,550	828,050		5,650
North Central	937,650	89,100	57,950	774,950		15,650
Total	1,880,300	177,500	78,500	1,603,000		21,300
South:						
Southeast	1,148,850	263,300	80,200	752,650		52,700
South Central	1,082,100	353,250	64,700	619,050		45,100
Total	2,230,950	616,550	144,900	1,371,700		97,800
West:						
Mountain	181,000	137,650	17,000	25,300		1,050
Pacific	1,336,450	517,450	343,450	454,300		21,250
Total	1,517,450	655,100	360,450	479,600		22,300
Total, United States	5,628,700	1,449,150	583,850	3,454,300		141,400
1963						
North:						
Northeast	793,400	62,800	18,550	707,000		5,050
North Central	780,100	74,600	53,150	639,700		12,650
Total	1,573,500	137,400	71,700	1,346,700		17,700
South:						
Southeast	1,001,500	221,150	61,050	665,850		53,450
South Central	888,950	320,500	24,300	504,500		39,650
Total	1,890,450	541,650	85,350	1,170,350		93,100
West:						
Mountain	150,500	115,150	4,900	29,750		700
Pacific	1,180,000	459,650	314,050	385,300		21,000
Total	1,330,500	574,800	318,950	415,050		21,700
Total, United States	4,794,450	1,253,850	476,000	2,932,100		132,500

¹ Includes manufacturers of particleboard, excelsior, wood shingles, cooperage, and wood and gum naval stores.

Note: Industry composition and definitions are given in Appendix B.

Sources: Estimates of value added attributed to timber are based on value added by industry (table A-13) and ratios between the cost of timber products consumed and the cost of all materials consumed by industry, published by the U.S. Department of Commerce, Bureau of the Census in the 1963, 1967, and 1972 Censuses of Manufactures. Changes in the industry ratios during the study period are due to changes in industry composition (see Appendix B) as well as changes in the consumption ratios.

Table A-16—Estimated value added attributed to timber in primary manufacturing industries in the United States, by region and State, 1972, 1967, and 1963

(Thousand dollars)							
Region and State	1972	1967	1963	Region and State	1972	1967	1963
North:				South Central:			
Northeast:				Kentucky	\$5,150	36,500	24,450
Maine	273,000	225,150	181,900	Tennessee	202,500	158,150	137,450
New Hampshire	54,400	50,600	33,500	Alabama	363,250	247,750	179,850
Vermont	31,300	19,200	15,200	Mississippi	282,450	126,250	102,500
Massachusetts	128,300	127,300	116,150	Arkansas	307,350	160,450	129,500
Rhode Island	4,050	2,150	1,750	Louisiana	373,800	203,550	198,600
Connecticut	43,200	33,050	28,900	Oklahoma	52,650	19,450	14,000
New York	230,200	195,700	166,250	Texas	243,150	133,800	101,800
New Jersey	100,750	95,050	88,550	Total	1,910,300	1,082,100	888,950
Pennsylvania	243,450	194,250	161,200	Total, South	3,603,400	2,230,950	1,890,450
Total	1,108,450	942,650	793,400				
North Central:				West:			
Ohio	233,650	206,200	165,600	Mountain:			
Indiana	75,600	61,000	55,500	Montana	\$9,350	59,150	39,750
Illinois	70,450	61,650	46,950	Idaho	146,450	73,450	65,750
Michigan	214,800	159,300	139,250	Wyoming	3,450	4,500	3,800
Wisconsin	398,250	323,150	263,900	Colorado	15,300	13,300	11,050
Minnesota	121,450	84,700	72,100	New Mexico	20,650	6,750	8,200
Iowa	13,800	9,400	6,650	Arizona	23,050	20,050	18,350
Missouri	31,250	23,100	20,300	Utah	7,950	1,300	2,700
North Dakota	1,150			Nevada	2,150	2,500	900
South Dakota	6,150	2,650	1,650	Total	313,350	181,000	150,500
Nebraska	750	750					
Kansas	9,650	5,500	5,450	Pacific:			
Total	1,176,950	937,650	780,100	Washington	786,050	467,700	410,450
Total, North	2,285,600	1,880,500	1,573,500	Oregon	1,122,750	531,650	473,450
South:				California	647,800	295,500	271,200
Southeast:				Alaska	37,500	29,100	23,700
Delaware	10,350	6,050	4,450	Hawaii	500	500	1,200
Maryland	77,250	51,750	37,400	Total	2,594,600	1,336,450	1,180,000
Virginia	304,900	215,450	176,750	Total, West	5,907,950	3,517,450	3,330,500
West Virginia	46,700	40,150	30,250	Total, United States	8,796,550	5,821,100	4,794,450
North Carolina	342,600	251,700	194,450				
South Carolina	217,700	131,700	121,200				
Georgia	457,250	278,000	269,950				
Florida	236,350	174,050	166,450				
Total	1,693,100	1,148,450	1,001,500				

Less than \$100 thousand dollars.

Note: Industry composition and definitions are given in Appendix B.

Sources: See table A-15.

**Table A-17—Estimated employment in primary manufacturing industries in the United States,
by industry and region, 1972, 1967, and 1963**

Region	Total	Sawmills and planing mills	Veneer and plywood plants	Pulp, paper and paper- board mills	All other [†]
1972					
North:					
Northeast	69,750	10,300	2,650	56,500	2
North Central	72,600	12,000	5,150	52,850	2,600
Total	142,350	22,300	7,800	109,350	2,900
South:					
Southeast	97,300	37,750	13,050	41,500	5,000
South Central	110,200	51,800	11,850	41,350	5,200
Total	207,500	89,550	24,900	82,850	10,200
West:					
Mountain	18,300	14,950	1,550	1,300	500
Pacific	119,750	56,700	32,150	24,200	6,700
Total	138,050	71,650	33,700	25,500	7,200
Total, United States	487,900	183,500	66,400	217,700	20,300
1967					
North:					
Northeast	81,550	12,050	2,950	65,950	600
North Central	79,400	11,950	6,550	58,700	2,200
Total	160,950	24,000	9,500	124,650	2,800
South:					
Southeast	101,100	41,300	13,400	43,100	3,300
South Central	106,350	56,900	8,750	36,600	4,100
Total	207,450	98,200	22,150	79,700	7,400
West:					
Mountain	18,900	15,550	1,700	1,550	2
Pacific	114,600	51,350	36,850	23,700	2,700
Total	133,500	66,900	38,550	25,250	2,800
Total, United States	501,900	189,100	70,200	229,600	13,000
1963					
North:					
Northeast	81,950	12,100	2,650	66,550	650
North Central	74,900	13,350	7,000	52,400	2,150
Total	156,850	25,450	9,650	118,950	2,800
South:					
Southeast	106,400	50,100	12,350	40,150	3,800
South Central	107,850	65,100	4,700	33,950	4,100
Total	214,250	115,200	17,050	74,100	7,900
West:					
Mountain	17,750	15,450	750	1,400	2
Pacific	113,550	53,800	35,350	21,300	3,100
Total	131,300	69,250	36,100	22,700	3,250
Total, United States	502,400	209,900	62,800	215,750	13,950

See footnotes on page 48.

Table A-18—Estimated employment in primary manufacturing industries in the United States, by region and State, 1972, 1967, and 1963

(Number)							
Region and State	1972	1967	1963	Region and State	1972	1967	1963
North:				South Central:			
Northeast:				Kentucky	6,000	5,350	5,650
Maine	16,300	18,300	16,750	Tennessee	12,750	15,500	15,650
New Hampshire	4,250	4,400	4,400	Alabama	21,000	21,450	20,600
Vermont	2,000	2,350	2,650	Mississippi	16,750	13,800	14,500
Massachusetts	7,950	11,300	12,050	Arkansas	18,150	17,650	17,850
Rhode Island				Louisiana	18,950	17,300	20,900
Connecticut	2,150	2,250	2,450	Oklahoma	2,850	2,600	1,500
New York	14,800	17,400	18,600	Texas	13,750	12,700	11,200
New Jersey	6,050	7,350	7,650	Total	110,200	106,350	107,850
Pennsylvania	15,950	17,950	17,200	Total, South	207,500	207,450	214,250
Total	69,750	81,550	81,950	West:			
North Central:				Mountain:			
Ohio	13,600	15,250	12,850	Montana	5,350	5,000	5,200
Indiana	5,450	6,150	6,200	Idaho	7,600	8,100	6,950
Illinois	4,900	6,200	5,250	Wyoming	500	500	500
Michigan	13,400	14,000	12,900	Colorado	1,300	1,400	1,400
Wisconsin	23,150	24,950	24,800	New Mexico	1,250	1,200	1,150
Minnesota	7,650	7,600	7,500	Arizona	1,650	2,100	2,000
Iowa	750	900	900	Utah	550	500	500
Missouri	2,650	3,450	3,600	Nevada			
North Dakota				Total	18,300	18,900	17,750
South Dakota				Pacific:			
Nebraska				Washington	36,900	36,800	36,550
Kansas	600	550	550	Oregon	52,700	51,050	48,700
Total	72,600	79,400	74,900	California	28,750	25,200	27,000
Total, North	142,350	160,950	156,850	Alaska	1,350	1,550	1,250
South:				Hawaii			
Southeast:				Total	119,750	114,600	113,550
Delaware	500	650	550	Total, West	138,050	133,500	131,300
Maryland	3,900	4,050	3,900	Total, United States	487,900	501,900	502,400
Virginia	18,700	19,350	20,600				
West Virginia	3,550	5,000	5,400				
North Carolina	24,900	26,800	27,400				
South Carolina	12,450	12,750	13,450				
Georgia	22,000	20,700	22,300				
Florida	11,300	11,800	12,800				
Total	97,300	101,100	106,400				

¹ Less than 500 employees.

Note: Industry composition and definitions are given in Appendix B.

Sources: See table A-17.

Footnotes for Table A-17.

¹ Includes enterprises manufacturing particleboard, excelsior, wood shingles, cooperage, and gum and wood naval stores.² Less than 500 employees.

Note: Industry composition and definitions are given in Appendix B.

Source: Employment: U.S. Department of Commerce, Bureau of the Census 1963, 1967, and 1972 Censuses of Manufactures. The sawmills and planing mills industry employment data were adjusted to include estimates of employment in logging and woods operations conducted in combination with those industries. The employment reported by Census and the comparable estimates made for this study are shown below. Estimates of employment for States and regions for which no Census information was published were derived from table footnotes and industry trend data.

Region	1972		1967		1963	
	Census	This study	Census	This study	Census	This study
	(Number)	(Number)	(Number)	(Number)	(Number)	(Number)
Sawmills and planing mills						
North	26,035	22,300	28,700	24,000	30,566	25,450
South	90,665	89,550	100,500	98,200	118,597	115,200
West	81,000	71,650	79,200	66,900	86,330	69,250
Total	197,700	183,500	208,400	189,100	235,493	209,900
Veneer and plywood plants						
North	8,100	7,800	10,000	9,500	10,248	9,650
South	25,400	24,900	22,500	22,150	17,288	17,050
West	35,300	33,700	40,400	38,550	38,619	36,100
Total	68,800	66,400	72,900	70,200	66,155	62,800
Pulp, paper, and paperboard mills						
North	110,400	109,350	126,100	124,650	120,531	118,950
South	83,700	82,850	80,600	79,700	74,991	74,050
West	26,500	25,500	27,100	25,250	24,721	22,700
Total	220,600	217,700	233,800	229,600	220,243	215,750

**Table A-19—Estimated employment attributed to timber in primary manufacturing industries in the United States,
by industry and region, 1972, 1967, and 1963**

Region	Total	(Number)			
		Sawmills and planing mills	Veneer and plywood plants	Pulp, paper and paper- board mills	All other ¹
1972					
North:					
Northeast	59,850	9,450	2,400	47,700	² 1,850
North Central	61,800	10,950	4,600	44,400	
Total	121,650	20,400	7,000	92,100	2,150
South:					
Southeast	85,150	35,100	11,400	35,100	3,550
South Central	96,400	47,800	10,300	34,900	3,400
Total	181,550	82,900	21,700	70,000	6,950
West:					
Mountain	16,950	14,200	1,350	1,100	² 4,400
Pacific	106,400	53,700	27,650	20,650	
Total	123,350	67,900	29,000	21,750	4,700
Total, United States	426,550	171,200	57,700	183,850	13,800
1967					
North:					
Northeast	68,700	11,300	2,650	54,200	550
North Central	66,550	11,150	5,950	47,400	2,050
Total	135,250	22,450	8,600	101,600	2,600
South:					
Southeast	87,100	38,900	12,050	33,050	3,100
South Central	94,050	53,350	7,850	29,050	3,800
Total	181,150	92,250	19,900	62,100	6,900
West:					
Mountain	17,600	14,750	1,500	1,250	² 2,400
Pacific	103,750	48,800	33,200	19,350	
Total	121,350	63,550	34,700	20,600	2,500
Total, United States	437,750	178,250	63,200	184,300	12,000
1963					
North:					
Northeast	70,550	11,350	2,350	56,250	600
North Central	64,850	12,450	6,300	44,100	2,000
Total	135,400	23,800	8,650	100,350	2,600
South:					
Southeast	96,100	47,250	11,100	34,150	3,600
South Central	97,700	61,150	4,250	28,500	3,800
Total	193,800	108,400	15,350	62,650	7,400
West:					
Mountain	16,650	14,700	650	1,200	² 2,800
Pacific	103,900	51,100	31,850	18,150	
Total	120,550	65,800	32,500	19,350	2,900
Total, United States	449,750	198,000	56,500	182,350	12,900

¹ Includes enterprises manufacturing particleboard, excelsior, wood shingles, cooperage, and gum and wood naval stores.

² Less than 500 employees.

Note: Industry composition and definitions are given in Appendix B.

Sources: Estimates of employment attributed to timber are based on employment by industry (table 17) and ratios between the cost of timber products consumed and the cost of all materials consumed by industry, published by the U.S. Department of Commerce, Bureau of the Census in the 1963, 1967, and 1972 Censuses of Manufactures. Changes in the industry ratios during the study period are due to changes in industry composition (see Appendix B) as well as changes in the consumption ratios.

Table A-20—Estimated employment attributed to timber in primary manufacturing industries in the United States,
by region and State, 1972, 1967, and 1963

(Number)						
Region and State	1972	1967	1963	Region and State	1972	1967
North:				South Central:		
Northeast:				Kentucky	5,250	4,950
Maine	14,000	15,800	14,450	Tennessee	11,150	13,650
New Hampshire	3,700	3,850	3,850	Alabama	18,550	18,850
Vermont	1,800	2,050	2,350	Mississippi	14,600	12,550
Massachusetts	6,800	9,450	10,300	Arkansas	16,050	15,850
Rhode Island				Louisiana	16,350	14,500
Connecticut	1,350	1,750	2,150	Oklahoma	2,200	2,400
New York	12,700	14,700	16,050	Texas	12,250	11,300
New Jersey	5,000	5,700	6,250	Total	96,400	94,050
Pennsylvania	13,750	15,250	14,950			97,700
Total	59,850	68,700	70,550	Total, South	181,550	181,150
North Central:						193,800
Ohio	11,650	12,600	11,000	West:		
Indiana	4,700	5,300	5,500	Mountain:		
Illinois	4,100	4,950	4,500	Montana	4,900	4,650
Michigan	11,300	11,600	11,250	Idaho	7,500	7,500
Wisconsin	19,800	21,250	21,450	Wyoming		500
Minnesota	6,300	6,200	6,300	Colorado	1,250	1,300
Iowa	650	700	800	New Mexico	1,150	1,150
Missouri	2,400	3,150	3,300	Arizona	1,550	1,950
North Dakota				Utah	500	1,850
South Dakota				Nevada		1
Nebraska				Total	16,950	17,600
Kansas	500					16,650
Total	61,800	66,550	64,850	Pacific:		
Total, North	121,650	135,250	135,400	Washington	33,050	33,050
South:				Oregon	46,150	46,400
Southeast:				California	25,950	22,900
Delaware		550	500	Alaska	1,250	1,400
Maryland	3,400	3,450	3,400	Hawaii		1,150
Virginia	16,050	16,550	18,600	Total	106,400	103,750
West Virginia	3,300	4,650	5,050			103,900
North Carolina	21,650	23,600	24,900	Total, West	123,350	121,350
South Carolina	10,950	10,950	12,200			120,550
Georgia	19,300	17,450	20,100	Total, United States	426,550	437,750
Florida	10,050	9,900	11,350			449,750
Total	85,150	87,100	96,100			

Less than 500 employees.

Note: Industry composition and definitions are given in Appendix B.

Sources: See table A-19.

**Table A-21—Estimated value of shipments from selected manufacturing secondary¹ industries in the United States,
by industry and region, 1972, 1967, and 1963**

Region	Total	Millwork and prefabricated wood products	Wooden containers	Furniture	(Thousand dollars)
					Paper and paperboard products
1972					
North:					
Northeast	7,599,200	974,500	114,600	1,859,100	4,651,000
North Central	10,871,900	2,473,900	182,800	2,451,000	5,764,200
Total	18,471,100	3,448,400	297,400	4,310,100	10,415,200
South:					
Southeast	6,474,600	1,469,600	126,000	2,763,750	2,115,250
South Central	5,444,000	1,394,300	222,100	1,719,250	2,108,350
Total	11,918,600	2,863,900	348,100	4,483,000	4,223,600
West:					
Mountain	616,600	409,700	5,500	127,700	73,700
Pacific	4,516,300	1,362,800	122,500	1,190,200	1,840,800
Total	5,132,900	1,772,500	128,000	1,317,900	1,914,500
Total, United States	35,522,600	8,084,800	773,500	10,111,000	16,553,300
1967					
North:					
Northeast	5,727,450	409,900	67,900	1,440,800	3,808,850
North Central	7,483,550	1,238,600	84,300	1,837,400	4,323,250
Total	13,211,000	1,648,500	152,200	3,278,200	8,132,100
South:					
Southeast	3,631,150	471,300	87,450	1,712,800	1,359,600
South Central	2,973,600	417,400	172,050	1,082,600	1,301,550
Total	6,604,750	888,700	259,500	2,795,400	2,661,150
West:					
Mountain	252,950	113,900	5,700	61,700	71,650
Pacific	2,778,800	639,500	112,100	744,800	1,282,400
Total	3,031,750	753,400	117,800	806,500	1,354,050
Total, United States	22,847,500	3,290,600	529,500	6,880,100	12,147,300
1963					
North:					
Northeast	4,639,800	318,450	60,700	1,165,550	3,095,100
North Central	5,802,350	921,000	65,050	1,468,850	3,347,450
Total	10,442,150	1,239,450	125,750	2,634,400	6,442,550
South:					
Southeast	2,561,900	282,400	87,100	1,237,650	954,750
South Central	1,970,600	266,950	100,250	731,500	871,900
Total	4,532,500	549,350	187,350	1,969,150	1,826,650
West:					
Mountain	193,300	79,750	7,150	52,300	54,100
Pacific	2,240,750	518,500	81,250	638,700	1,002,300
Total	2,434,050	598,250	88,400	691,000	1,056,400
Total, United States	17,408,700	2,387,050	401,500	5,294,550	9,325,600

Note: Industry composition and definitions are given in Appendix B.

Sources: U.S. Department of Commerce, Bureau of the Census, 1963, 1967, and 1972 *Censuses of Manufactures*. Estimates for regions for which no Census information was published were derived from table footnotes and trend data.

Table A-22—Estimated value of shipments from selected secondary manufacturing industries¹ in the United States,
by region and State, 1972, 1967, and 1963

(Thousand dollars)						
Region and State	1972	1967	1963	Region and State	1972	1967
North:				South Central:		
Northeast:				Kentucky	390,750	292,400
Maine	172,050	119,100	79,500	Tennessee	1,136,200	635,600
New Hampshire	232,750	163,950	115,850	Alabama	828,850	334,700
Vermont	157,000	103,100	74,300	Mississippi	554,700	316,950
Massachusetts	981,750	831,800	673,000	Arkansas	603,800	388,600
Rhode Island	83,900	61,350	49,250	Louisiana	351,300	244,250
Connecticut	319,000	226,850	192,050	Oklahoma	175,250	72,300
New York	2,169,250	1,795,850	1,512,600	Texas	1,403,150	688,800
New Jersey	1,350,150	1,001,850	854,200	Total	5,444,000	2,973,600
Pennsylvania	2,133,350	1,423,600	1,089,050	Total, South	11,918,600	6,604,750
Total	7,599,200	5,727,450	4,639,800		4,532,500	
North Central:				West:		
Ohio	1,707,900	1,197,550	1,004,700	Mountain:		
Indiana	1,634,150	1,055,800	796,200	Montana	23,400	10,050
Illinois	2,159,000	1,544,850	1,208,050	Idaho	154,850	49,350
Michigan	1,313,150	1,004,050	916,300	Wyoming	600	1,700
Wisconsin	1,499,700	1,073,050	794,300	Colorado	180,600	86,650
Minnesota	829,650	593,100	337,900	New Mexico	31,200	16,750
Iowa	390,450	228,000	169,200	Arizona	141,650	51,200
Missouri	782,400	486,950	369,400	Utah	75,200	32,050
North Dakota	4,600	1,550	1,450	Nevada	9,100	5,200
South Dakota	38,050	15,050	9,750	Total	616,600	252,950
Nebraska	195,450	103,500	64,200		193,300	
Kansas	317,400	180,100	130,900	Pacific:		
Total	10,871,900	7,483,550	5,802,350	Washington	628,350	379,150
Total, North	18,471,100	13,211,000	10,442,150	Oregon	493,050	262,250
South:				California	3,329,500	2,104,750
Southeast:				Alaska	2,000	3,100
Delaware	41,400	32,950	16,200	Hawaii	63,400	29,550
Maryland	426,950	304,650	247,400	Total	4,516,300	2,778,800
Virginia	1,079,500	652,750	483,300		2,240,750	
West Virginia	167,050	46,400	37,900	Total, West	5,132,900	3,031,750
North Carolina	1,921,900	1,169,500	794,600	Total, United States	35,522,600	22,847,500
South Carolina	467,550	229,750	173,250		17,408,700	
Georgia	1,331,850	664,600	474,050			
Florida	1,038,400	530,550	335,200			
Total	6,474,600	3,630,150	2,561,900			

Includes the millwork and prefabricated wood products, wooden containers, furniture, and paper and paperboard products industries as shown in table A-21 and defined in Appendix B.
Sources: See table A-21.

**Table A-23—Estimated value added in selected secondary manufacturing industries in the United States,
by industry and region, 1972, 1967, and 1963**

Region	Total	(Thousand dollars)				
		Millwork and prefabricated wood products	Wooden containers	Furniture	Paper and paperboard products	Fibers, plastics, and textiles
1972						
North:						
Northeast	9,586,300	448,100	52,700	974,800	2,249,900	5,860,800
North Central	6,198,500	965,900	86,400	1,305,200	2,688,100	1,152,900
Total	15,784,800	1,414,000	139,100	2,280,000	4,938,000	7,013,700
South:						
Southeast	10,113,150	537,450	59,300	1,469,300	927,000	7,120,100
South Central	4,828,700	494,050	107,300	932,400	922,100	2,372,850
Total	14,941,850	1,031,500	166,600	2,401,700	1,849,100	9,492,950
West:						
Mountain	344,600	153,600	2,000	69,000	35,250	84,750
Pacific	2,928,250	528,300	51,100	644,200	782,750	921,900
Total	3,272,850	681,900	53,100	713,200	818,000	1,006,650
Total, United States	33,999,500	3,127,400	358,800	5,394,900	7,605,100	17,513,300
1967						
North:						
Northeast	8,908,200	169,300	34,700	760,800	1,800,200	6,143,200
North Central	4,698,650	472,300	42,600	997,600	1,922,000	1,264,150
Total	13,606,850	641,600	77,300	1,758,400	3,722,200	7,407,350
South:						
Southeast	6,888,900	161,100	43,350	918,050	569,650	5,196,750
South Central	3,403,250	141,600	75,650	540,450	526,000	2,119,550
Total	10,292,150	302,700	119,000	1,458,500	1,095,650	7,316,300
West:						
Mountain	146,150	41,200	2,650	30,900	30,950	40,450
Pacific	1,873,050	259,300	39,650	410,100	525,000	639,000
Total	2,019,200	300,500	42,300	441,000	555,950	679,450
Total, United States	25,918,200	1,244,800	238,600	3,657,900	5,373,800	15,403,100
1963						
North:						
Northeast	7,227,350	129,700	28,000	610,150	1,407,950	5,051,550
North Central	3,562,900	348,650	30,750	774,500	1,413,300	995,700
Total	10,790,250	478,350	58,750	1,384,650	2,821,250	6,047,250
South:						
Southeast	4,714,750	102,350	43,100	642,150	370,700	3,556,450
South Central	2,202,500	98,900	43,750	350,350	305,150	1,404,350
Total	6,917,250	201,250	86,850	992,500	675,850	4,960,800
West:						
Mountain	106,250	29,650	1,950	25,400	23,100	26,150
Pacific	1,441,650	203,850	26,700	343,100	383,150	484,850
Total	1,547,900	233,500	28,650	368,500	406,250	511,000
Total, United States	19,255,400	913,100	174,250	2,745,650	3,903,350	11,519,050

Note: Industry composition and definitions are given in Appendix B.

Sources: U.S. Department of Commerce, Bureau of the Census. 1963, 1967, and 1972 Censuses of Manufactures. Estimates for regions for which no Census information was published were derived from table footnotes and trend data.

Table A-24—Estimated value added in selected secondary manufacturing industries¹ in the United States, by region and State, 1972, 1967, and 1963

(Thousand dollars)						
Region and State	1972	1967	1963	Region and State	1972	1967
North:				South Central:		
Northeast:				Kentucky	396,650	302,150
Maine	159,950	111,150	90,000	Tennessee	1,178,200	928,300
New Hampshire	153,550	133,000	100,700	Alabama	1,018,900	683,450
Vermont	69,200	73,000	43,000	Mississippi	518,150	304,350
Massachusetts	1,073,300	982,900	795,600	Arkansas	414,750	245,900
Rhode Island	198,100	199,050	149,850	Louisiana	207,000	154,300
Connecticut	345,350	281,000	230,850	Oklahoma	125,100	63,150
New York	3,715,500	3,629,600	3,018,750	Texas	969,950	721,650
New Jersey	1,373,450	1,237,400	1,022,150			
Pennsylvania	2,497,900	2,261,100	1,776,450	Total	4,828,700	3,403,250
Total	9,586,300	8,908,200	7,227,350	Total, South	14,941,850	10,292,150
North Central:						
Ohio	1,054,400	865,000	703,250	West:		
Indiana	823,250	562,700	443,000	Mountain:		
Illinois	1,383,000	1,028,350	788,550	Montana	10,400	4,450
Michigan	675,000	592,100	580,250	Idaho	61,800	17,100
Wisconsin	718,600	531,100	283,950	Wyoming	400	650
Minnesota	485,350	362,950	213,650	Colorado	104,450	46,350
Iowa	220,500	174,450	114,000	New Mexico	16,400	8,550
Missouri	576,250	406,000	315,500	Arizona	82,700	38,000
North Dakota	5,000	500	550	Utah	62,600	28,150
South Dakota	23,100	9,900	3,550	Nevada	5,850	2,900
Nebraska	81,950	55,150	35,450			
Kansas	152,100	110,450	81,200	Total	344,600	146,150
Total	6,198,500	4,698,650	3,562,900	Pacific:		
Total, North	15,784,800	13,606,850	10,790,250	Washington	317,300	193,500
				Oregon	232,800	157,900
South:				California	2,315,700	1,493,900
Southeast:				Alaska	1,500	1,500
Delaware	46,300	57,700	43,250	Hawaii	60,950	26,250
Maryland	400,800	335,050	269,050			
Virginia	1,136,750	859,400	579,550	Total	2,928,250	1,873,050
West Virginia	164,850	215,500	139,700	Total, West	3,272,850	2,019,200
North Carolina	3,304,250	2,331,850	1,565,400	Total, United States	33,999,500	25,918,200
South Carolina	1,923,000	1,310,400	929,300			
Georgia	2,441,300	1,430,750	989,100			
Florida	695,900	348,250	199,400			
Total	10,113,150	6,888,900	4,714,750			

¹ Includes the millwork and prefabricated wood products; wooden containers; furniture; paper and paperboard products; and fibers, plastics, and textiles industries as shown in table A-23 and defined in Appendix B.

Sources: See table A-23.

**Table A-25—Estimated value added attributed to timber in secondary manufacturing industries in the United States,
by industry and region, 1972, 1967, and 1963**

Region	Total	Millwork and prefabricated wood products	Wooden containers	Furniture	Paper and paperboard products	Fibers, plastics, and textiles	All other	(Thousand dollars)
								1972
North:								
Northeast	3,224,350	303,050	48,300	294,150	1,509,450	923,050	146,350	
North Central	3,217,400	608,450	78,850	384,900	1,769,500	169,400	206,300	
Total	6,441,750	911,500	127,150	679,050	3,278,950	1,092,450	352,650	
South:								
Southeast	2,770,800	314,450	52,800	620,750	615,050	1,056,850	110,900	
South Central	1,766,150	281,300	96,050	309,850	606,700	336,700	135,550	
Total	4,536,950	595,750	148,850	930,600	1,221,750	1,393,550	246,450	
West:								
Mountain	167,200	96,450	1,800	19,950	24,750	11,850	12,400	
Pacific	1,358,300	347,100	46,450	190,000	537,300	130,800	106,650	
Total	1,525,500	443,550	48,250	209,950	562,050	142,650	119,050	
Total, United States	12,504,200	1,950,800	324,250	1,819,600	5,062,750	2,628,650	718,150	
1967								
North:								
Northeast	2,650,300	117,550	29,000	266,200	1,220,750	879,500	137,300	
North Central	2,252,300	294,000	35,150	320,900	1,281,100	145,650	175,500	
Total	4,902,600	411,550	64,150	587,100	2,501,850	1,025,150	312,800	
South:								
Southeast	1,768,500	94,700	35,400	437,500	381,550	746,850	72,500	
South Central	1,141,150	79,200	61,850	202,350	356,700	328,600	112,450	
Total	2,909,650	173,900	97,250	639,850	738,250	1,075,450	184,950	
West:								
Mountain	73,100	25,100	2,250	9,600	22,550	6,300	7,200	
Pacific	880,900	167,950	33,400	138,800	363,050	82,150	95,550	
Total	954,000	193,150	35,650	148,400	385,600	88,450	102,750	
Total, United States	8,776,250	778,600	197,050	1,375,350	3,625,700	2,189,050	600,500	
1963								
North:								
Northeast	2,150,450	93,800	23,550	214,400	972,350	747,200	99,150	
North Central	1,684,400	214,200	25,750	241,700	977,250	117,300	108,200	
Total	3,834,850	308,000	49,300	456,100	1,949,600	864,500	207,350	
South:								
Southeast	1,290,900	64,050	36,200	305,450	253,750	585,900	45,550	
South Central	773,450	68,350	36,650	131,650	211,600	238,550	86,650	
Total	2,064,350	132,400	72,850	437,100	465,350	824,450	132,200	
West:								
Mountain	55,350	19,750	1,650	8,700	16,450	4,350	4,450	
Pacific	684,100	138,450	22,600	122,100	266,950	68,600	65,400	
Total	739,450	158,200	24,250	130,800	283,400	72,950	69,850	
Total, United States	6,638,650	598,600	146,400	1,024,000	2,698,350	1,761,900	409,400	

Note: Industry composition and definitions are given in Appendix B.

Sources: Estimates of value added attributed to timber are based on value added by industry, and for most industries, the ratio between the cost of timber products consumed and the cost of all materials consumed. For those industries (generally in the Fibers, plastics, and textiles group) for which materials consumption was not available, ratios were estimated from the values of quantities of final goods produced. All data from the U.S. Department of Commerce, Bureau of the Census, 1963, 1967, and 1972 Censuses of Manufactures. For the "all other" grouping estimates derived from the volume of timber products consumed from data in U.S. Department of Agriculture, Forest Service, 1960 and 1965 reports of wood used in manufacturing industries.

Table A-26—Estimated value added attributed to timber in secondary manufacturing industries in the United States,
by region and State, 1972, 1967, and 1963

(Thousand dollars)						
Region and State	1972	1967	1963	Region and State	1972	1967
North:				South Central:		
Northeast:				Kentucky	142,500	83,700
Maine	89,600	59,400	43,450	Tennessee	393,900	310,850
New Hampshire	77,850	61,800	44,700	Alabama	283,300	165,300
Vermont	43,900	39,950	27,400	Mississippi	197,550	136,600
Massachusetts	426,800	352,650	283,400	Arkansas	193,600	124,800
Rhode Island	54,250	45,600	35,850	Louisiana	99,450	67,650
Connecticut	127,850	103,150	86,750	Oklahoma	48,750	24,700
New York	1,073,500	969,600	812,200	Texas	407,100	227,550
New Jersey	501,700	386,050	329,100	Total	1,766,150	1,141,150
Pennsylvania	828,900	632,100	487,600			773,450
Total	3,224,350	2,650,300	2,150,450	Total, South	4,536,950	2,909,650
North Central:						2,064,350
Ohio	517,950	367,700	290,050	West:		
Indiana	427,350	275,550	198,150	Mountain:		
Illinois	683,500	486,350	368,900	Montana	8,700	4,300
Michigan	393,650	298,600	252,750	Idaho	32,300	9,600
Wisconsin	431,000	319,700	230,800	Wyoming	2,350	1,850
Minnesota	265,750	181,200	109,400	Colorado	50,350	25,150
Iowa	124,000	74,600	50,250	New Mexico	8,750	5,150
Missouri	255,550	179,150	134,350	Arizona	37,950	16,000
North Dakota	1,900	-	-	Utah	23,100	9,300
South Dakota	9,600	4,650	2,550	Nevada	3,700	1,750
Nebraska	40,250	24,900	16,400	Total	167,200	73,100
Kansas	66,900	39,450	30,350			55,350
Total	3,217,400	2,252,300	1,684,400	Pacific:		
Total, North	6,441,750	4,902,600	3,834,850	Washington	192,300	119,350
South:				Oregon	157,450	107,300
Southeast:				California	981,150	640,950
Delaware	18,250	13,600	8,850	Alaska	850	1,200
Maryland	168,900	138,300	102,450	Hawaii	26,550	12,100
Virginia	431,750	296,350	214,800	Total	1,358,300	880,900
West Virginia	74,150	48,900	46,800			684,100
North Carolina	819,550	584,550	406,700	Total, West	1,525,500	954,000
South Carolina	416,600	237,950	192,300			739,450
Georgia	542,800	294,550	225,350	Total, United States	12,504,200	8,766,250
Florida	298,800	154,300	93,650			6,638,650
Total	2,770,800	1,768,500	1,290,900			

¹ Less than 500 thousand dollars.

Note: Industry composition and definitions are given in Appendix B.

Sources: See table A-25.

**Table A-27—Estimated employment in selected secondary manufacturing industries in the United States,
by industry and region, 1972, 1967, and 1963**

Region	Total	(Number)				
		Millwork and prefabricated wood products	Wooden containers	Furniture	Paper and paperboard products	Fibers, plastics, and textiles
1972						
North:						
Northeast	769,350	28,900	5,400	72,350	131,000	531,700
North Central	406,450	61,500	8,700	93,750	139,600	102,900
Total	1,175,800	90,400	14,100	166,100	270,600	634,600
South:						
Southeast	884,550	40,950	7,500	123,800	53,100	659,200
South Central	449,650	40,350	11,000	81,700	49,200	267,400
Total	1,334,200	81,300	18,500	205,500	102,300	926,600
West:						
Mountain	30,700	11,650	—	5,400	2,850	10,600
Pacific	202,700	35,950	4,100	45,700	37,150	79,800
Total	233,400	47,600	4,300	51,100	40,000	90,400
Total, United States	2,743,400	219,300	36,900	422,700	412,900	1,651,600
1967						
North:						
Northeast	923,500	15,800	4,400	77,600	141,300	684,400
North Central	410,400	44,000	5,000	94,600	139,600	127,200
Total	1,333,900	59,800	9,400	172,200	280,900	811,600
South:						
Southeast	821,350	18,200	7,550	105,650	48,600	641,350
South Central	395,050	17,700	9,550	68,050	37,900	261,850
Total	1,216,400	35,900	17,100	173,700	86,500	903,200
West:						
Mountain	17,950	4,800	—	3,450	2,300	7,050
Pacific	167,450	24,200	4,450	37,350	35,400	66,050
Total	185,400	29,000	4,800	4,800	37,700	73,100
Total, United States	2,735,700	124,700	31,300	386,700	405,100	1,787,900
1963						
North:						
Northeast	926,800	14,200	4,700	74,600	133,850	699,450
North Central	384,200	38,150	5,000	88,500	128,300	124,250
Total	1,311,000	52,350	9,700	163,100	262,150	823,700
South:						
Southeast	696,250	13,700	9,100	89,750	40,050	543,650
South Central	322,250	14,100	8,000	54,100	31,350	214,700
Total	1,018,500	27,800	17,100	143,850	71,400	758,350
West:						
Mountain	14,500	3,850	—	3,200	2,000	5,150
Pacific	156,050	22,750	3,800	35,800	32,250	61,450
Total	170,550	26,600	4,100	39,000	34,250	66,600
Total, United States	2,500,050	106,750	30,900	345,950	367,800	1,648,650

¹ Less than 500 employees.

Note: Industry composition and definitions are given in Appendix B.

Sources: U.S. Department of Commerce, Bureau of the Census. 1963, 1967, and 1972 *Censuses of Manufactures*. Estimates for States and regions for which no Census information was published were derived from table footnotes and trend data.

Table A-28—Estimated employment in selected secondary manufacturing industries¹ in the United States, by region and State, 1972, 1967, and 1963

(Number)						
Region and State	1972	1967	1963	Region and State	1972	1967
North:				South Central:		
Northeast:				Kentucky	33,600	34,100
Maine	11,800	12,300	12,200	Tennessee	108,150	107,700
New Hampshire	10,900	13,300	12,850	Alabama	98,000	81,700
Vermont	6,000	7,500	5,200	Mississippi	52,750	45,850
Massachusetts	82,150	107,050	106,000	Arkansas	35,700	27,300
Rhode Island	15,850	20,400	19,300	Louisiana	16,950	13,850
Connecticut	27,700	29,950	30,050	Oklahoma	11,700	8,000
New York	277,850	345,500	361,700	Texas	92,800	76,550
New Jersey	105,700	114,150	119,200	Total	449,650	395,050
Pennsylvania	231,400	273,350	260,300			322,250
Total	769,350	923,500	926,800	Total, South	1,334,200	1,216,400
						1,018,500
North Central:				West:		
Ohio	66,150	70,850	70,350	Mountain:		
Indiana	58,100	54,750	49,950	Montana	750	550
Illinois	90,900	94,950	90,250	Idaho	4,400	1,650
Michigan	43,700	50,400	48,850	Wyoming	2	2
Wisconsin	44,250	44,850	37,300	Colorado	8,200	4,800
Minnesota	27,050	23,400	21,350	New Mexico	1,350	1,150
Iowa	14,500	13,150	10,900	Arizona	8,250	4,950
Missouri	43,100	41,850	41,800	Utah	7,150	4,400
North Dakota	:	:	:	Nevada	550	350
South Dakota	2,000	1,100	350	Total	30,700	17,950
Nebraska	5,700	5,000	4,400			14,500
Kansas	10,600	10,000	8,600	Pacific:		
Total	406,450	410,400	384,200	Washington	19,800	16,850
Total, North	1,175,800	1,333,900	1,311,000	Oregon	15,350	14,600
South:				California	162,900	132,950
Southeast:				Alaska	2	2
Delaware	3,750	5,150	3,750	Hawaii	4,550	2,950
Maryland	32,100	35,350	34,400	Total	202,700	167,450
Virginia	100,150	97,650	80,250			156,050
West Virginia	13,250	14,900	12,050	Total, West	233,400	185,400
North Carolina	319,150	297,500	241,400			170,550
South Carolina	170,500	161,650	144,050	Total, United States	2,743,400	2,735,700
Georgia	188,850	169,250	150,450			2,500,050
Florida	56,800	39,900	29,900			
Total	884,550	821,350	696,250			

¹ Includes the millwork and prefabricated wood products; wooden containers; furniture; paper and paperboard products; and fibers, plastics, and textiles industries as shown in table A-27 and defined in Appendix B.

² Less than 500 employees.

Sources: See table A-27.

**Table A-29—Estimated employment attributed to timber in secondary manufacturing industries in the United States,
by industry and region, 1972, 1967, and 1963**

Region	Total	(Number)					
		Millwork and prefabricated wood products	Wooden containers	Furniture	Paper and paperboard products	Fibers, plastics, and textiles	All other
1972							
North:							
Northeast	232,600	19,600	4,950	23,450	88,600	84,050	11,950
North Central	200,650	39,200	7,950	30,150	94,600	14,900	13,850
Total	433,250	58,800	12,900	53,600	183,200	98,950	25,800
South:							
Southeast	224,600	24,400	6,650	52,450	35,450	97,550	8,100
South Central	142,950	23,000	9,850	28,950	32,250	38,450	10,450
Total	367,550	47,400	16,500	81,400	67,700	136,000	18,550
West:							
Mountain	13,650	7,300	1,700	2,050	1,550	850	
Pacific	85,950	23,600	3,700	14,400	25,450	12,450	6,350
Total	99,600	30,900	3,900	16,100	27,500	14,000	7,200
Total, United States	900,400	137,100	33,300	151,100	278,400	248,950	51,550
1967							
North:							
Northeast	256,250	11,000	3,650	28,750	96,450	100,000	16,400
North Central	193,900	27,200	4,150	33,100	95,650	16,200	17,600
Total	450,150	38,200	7,800	61,850	192,100	116,200	34,000
South:							
Southeast	196,850	10,900	6,200	50,700	32,750	88,400	7,900
South Central	122,100	10,650	7,800	27,150	25,300	38,800	12,400
Total	318,950	21,550	14,000	77,850	58,050	127,200	20,300
West:							
Mountain	7,800	2,950	1,100	1,600	1,100	750	
Pacific	74,050	15,250	3,750	13,250	24,600	9,050	8,150
Total	81,850	18,200	4,050	14,350	26,200	10,150	8,900
Total, United States	850,950	77,950	25,850	154,050	276,350	253,550	63,200
1963							
North:							
Northeast	256,600	10,350	3,950	28,000	92,600	107,300	14,400
North Central	178,100	24,050	4,200	30,350	89,300	16,800	13,400
Total	434,700	34,400	8,150	58,350	181,900	124,100	27,800
South:							
Southeast	173,550	9,050	7,650	42,700	27,450	80,200	6,500
South Central	104,350	9,800	6,700	21,550	21,300	33,950	11,050
Total	277,900	18,850	14,350	64,250	48,750	114,150	17,550
West:							
Mountain	6,850	2,550	1,100	1,400	900	600	
Pacific	70,350	15,150	3,200	13,200	22,700	9,500	6,600
Total	77,200	17,700	3,500	14,300	24,100	10,400	7,200
Total, United States	789,800	70,950	26,000	136,900	254,750	248,650	52,550

¹ Less than 500 employees.

Note: Industry composition and definitions are given in Appendix B.

Source: Estimates of employment attributed to timber are based on employment by industry, and for most industries, the ratio between the cost of timber products consumed and the cost of all materials consumed. For those industries (generally in the fibers, plastics, and textile group) for which materials consumption was not available, ratios were estimated from the values or quantities of final good produced. All data from the U.S. Department of Commerce, Bureau of the Census, 1963, 1967, and 1972 *Censuses of Manufactures*. For the "all other" grouping, estimates derived from the volume of timber products consumed data in U.S. Department of Agriculture, Forest Service, 1960 and 1965 reports on wood used in manufacturing industries.

Table A-30—Estimated employment attributed to timber in secondary manufacturing industries in the United States, by region and State, 1972, 1967, and 1963

(Number)						
Region and State	1972	1967	1963	Region and State	1972	1967
North:				South Central:		
Northeast:				Kentucky	10,400	9,350
Maine	6,000	6,650	5,850	Tennessee	31,950	32,100
New Hampshire	5,600	5,700	5,500	Alabama	22,600	16,900
Vermont	3,500	3,550	3,150	Mississippi	17,500	16,200
Massachusetts	29,950	35,550	35,250	Arkansas	14,750	12,200
Rhode Island	4,000	4,800	4,750	Louisiana	7,200	6,650
Connecticut	9,450	10,000	10,100	Oklahoma	4,250	2,900
New York	77,400	89,550	93,750	Texas	34,300	25,800
New Jersey	33,200	33,200	35,400	Total	142,950	122,100
Pennsylvania	63,500	67,250	62,850		104,350	
Total	232,600	256,250	256,600	Total, South	367,550	318,950
North Central:					277,900	
Ohio	31,600	30,850	30,050	West:		
Indiana	28,900	26,900	23,400	Mountain:		
Illinois	42,900	44,150	40,500	Montana	600	500
Michigan	24,650	26,550	25,350	Idaho	2,350	850
Wisconsin	25,300	25,700	22,500	Wyoming		
Minnesota	13,900	11,100	9,800	Colorado	3,950	2,300
Iowa	7,850	5,950	5,150	New Mexico	700	650
Missouri	17,600	16,300	15,700	Arizona	3,350	1,850
North Dakota				Utah	2,200	1,300
South Dakota	650			Nevada		
Nebraska	2,700	2,300	2,050	Total	13,650	7,800
Kansas	4,450	3,600	3,250		6,850	
Total	200,650	193,900	178,100	Pacific:		
Total, North	433,250	450,150	434,700	Washington	10,850	10,000
South:				Oregon	9,750	9,700
Southeast:				California	63,550	53,000
Delaware	1,350	1,500	950	Alaska		
Maryland	12,250	13,150	11,850	Hawaii	1,750	1,250
Virginia	35,400	31,250	26,650	Total	85,950	74,050
West Virginia	5,150	4,150	4,250		70,350	
North Carolina	76,800	70,600	59,250	Total, West	99,600	81,850
South Carolina	33,700	27,800	26,400		77,200	
Georgia	37,950	32,500	30,950	Total, United States	900,400	850,950
Florida	22,000	15,900	13,250		789,800	
Total	224,600	196,850	173,550			

¹ Less than 500 employees.

Note: Industry composition and definitions are given in Appendix B.

Sources: See table A-29.

Table A-31—Value of new construction put in place in the United States, by type, 1963–72

Type of construction	(Million dollars)									
	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Private:										
Residential buildings ¹	27,874	28,010	27,934	25,715	25,568	30,565	33,200	31,864	43,267	54,288
Nonresidential buildings	11,646	12,955	16,509	18,279	17,589	18,164	21,155	21,417	22,479	24,038
Utilities	4,667	5,031	5,788	6,803	7,603	8,969	9,535	11,020	11,783	13,202
Other	1,268	1,296	1,454	1,610	1,786	1,790	2,063	2,458	2,550	2,373
Total	45,455	47,292	51,685	52,407	52,546	59,488	65,953	66,759	80,079	93,901
Public:										
Buildings	6,534	7,177	7,893	8,920	9,982	10,439	11,230	10,657	11,397	11,500
Highways and streets	7,084	7,133	7,550	8,405	8,591	9,321	9,250	9,981	10,658	10,429
Other	5,739	6,073	6,619	6,682	6,963	7,845	7,484	7,458	7,816	8,255
Total	19,357	20,383	22,062	24,007	25,536	27,605	27,964	28,096	29,871	30,184
Total, all types	64,812	67,675	73,747	76,414	78,082	87,093	93,917	94,855	109,950	124,085

¹ Includes additions and alterations.

Note: Data shown in this table do not include the value of maintenance and repair construction of existing residential and nonresidential structures, estimated at \$20,500 million in 1963, \$24,300 million in 1967, and \$35,000 million in 1972.

Source: U.S. Department of Commerce, Bureau of the Census. *Value of new construction put in place*. Constr. Reps. C39-76-4, 1976.

Footnotes for Table A-39, page 71.

¹ Less than 500 employees.

Sources: *Railroad*—Estimates of State and regional employment in railroad freight operations were derived by (1) distributing total U.S. employment in railroad transportation from the 1972, 1967, and 1963 editions of *Employment and Earnings*, published by the U.S. Department of Labor, Bureau of Labor Statistics, using the State and regional distribution of the average number of employees covered by the Railroad Retirement and Railroad Unemployment Insurance Acts and (2) adjusting these estimates by the proportion of total railroad revenues due to freight operations (95.9 percent in 1972, 91.5 percent in 1967, and 88.4 percent in 1963). These ratios were calculated, by region, from data in the 1972, 1967, and 1963 editions of *Transport Statistics in the United States* published by the U.S. Interstate Commerce Commission. Estimates of value added attributed to timber were derived by adjusting the value added in railroad freight operations by the proportion of total freight revenues that were derived from timber products (13.5 percent in 1972, 12.2 percent in 1967, and 13.8 percent in 1963). These ratios were calculated from data on freight revenues by commodity class and region published by the U.S. Interstate Commerce Commission, Bureau of Accounts in the 1972, 1967, and 1963 editions of *Freight Commodity Statistics*.

Truck—Estimates of total employment in truck freight transportation and warehousing by State and region were derived from data on total U.S. employment, and State and regional employment covered by State Unemployment Insurance Laws and Unemployment Compensation for Federal Employees programs, published in the U.S. Department of Labor, Bureau of Labor Statistics publications *Employment and Earnings* and *Employment and Wages*. Estimates of employment attributed to timber were derived by adjusting the total estimated employment in trucking and warehousing by the proportion of total freight revenues that were derived from timber products (5.7 percent in 1972, 5.6 percent in 1967, and 7.2 percent in 1963). These ratios were calculated from data on freight revenues by commodity class and region published by the U.S. Interstate Commerce Commission, Bureau of Accounts in the 1972, 1967, and 1963 editions of *Freight Commodity Statistics*.

Water—Estimates of total employment in water freight transportation by State and region were derived from data on total U.S. employment, and State and regional employment covered by State Employment Insurance Laws and Unemployment Compensation for Federal Employees programs, published in the U.S. Department of Labor Statistics publications *Employment and Earnings* and *Employment and Wages*. Estimates of employment attributed to timber were derived by adjusting the total estimated employment in water transportation by the proportion of total freight revenues that were derived from timber products (10.3 percent in 1972, 11.3 percent in 1967, and 17.1 percent in 1963). These ratios were calculated from data on water freight revenues by commodity class (and region for 1963) published by the U.S. Interstate Commerce Commission, Bureau of Accounts in 1972, 1967, and 1963 editions of *Freight Commodity Statistics*.

Table A-32—Housing starts in the United States, by region, 1963–72

Region	(Thousand units)									
	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Northeast	271.4	262.7	281.3	215.6	223.5	236.4	212.9	224.1	271.0	334.1
North Central	335.9	346.5	368.7	297.3	343.9	377.0	356.6	301.4	439.9	445.3
Total, North	607.3	609.2	650.0	512.9	567.4	613.4	569.5	525.5	710.9	779.4
South	595.8	589.8	588.6	482.9	531.5	633.7	602.9	628.9	883.9	1,067.5
West	431.8	362.0	271.1	200.0	223.0	298.3	327.2	314.5	489.8	531.5
Total, United States	1,634.9	1,561.0	1,509.7	1,195.8	1,321.9	1,545.4	1,499.5	1,469.0	2,084.5	2,378.5

Note: Data may not add to totals due to rounding.

Source: U.S. Department of Commerce, Bureau of the Census, *Housing starts*. Constr. Rep. Ser. C20-76-8, 1976.

Footnotes for Table A-36, page 67.

¹ Less than \$500,000.

Sources: *Railroad*—Estimates of total U.S. value added in railroad freight operations were derived by adjusting total value added in railroad transportation from the 1972, 1967, and 1963 editions of the *Input-output Structure of the U.S. Economy* published by the U.S. Department of Commerce, Bureau of Economic Analysis, by the proportion of total railroad revenues due to freight operations (95.9 percent in 1972, 91.5 percent in 1967, and 88.4 percent in 1963). These ratios were calculated, by region, from data in the 1972, 1967, and 1963 editions of *Transport Statistics in the United States* published by the U.S. Interstate Commerce Commission, Bureau of Accounts. The State and regional distribution of value added due to freight operations was based on unpublished data from the U.S. Department of Commerce, Bureau of Economic Analysis showing income in railroad transportation by place of work. Estimates of value added attributed to timber were derived by adjusting the total value added in railroad freight operations by the proportion of total freight revenues that were derived from timber products (13.5 percent in 1972, 12.1 percent in 1967, and 13.8 percent in 1963). These ratios were calculated from data on freight revenues by commodity class and region published by the U.S. Interstate Commerce Commission, Bureau of Accounts in the 1972, 1967, and 1963 editions of *Freight Commodity Statistics*.

Truck—Estimates of total U.S. value added in truck freight transportation and warehousing were derived from the 1972, 1967, and 1963 editions of the *Input-output Structure of the U.S. Economy* published by the U.S. Department of Commerce, Bureau of Economic Analysis. State and regional estimates of value added were based on unpublished data from the U.S. Department of Commerce, Bureau of Economic Analysis showing income in trucking and warehousing by place of work. Estimates of value added attributed to timber were derived by adjusting the total value added in trucking and warehousing by the proportion of total freight revenues that were derived from timber products (5.7 percent in 1972, 5.6 percent in 1967, and 7.2 percent in 1963). These ratios were calculated from data on freight revenues by commodity class and region published by the U.S. Interstate Commerce Commission, Bureau of Accounts in the 1972, 1967, and 1963 editions of *Freight Commodity Statistics*.

Water—Estimates of total U.S. value added in water freight transportation were derived from the 1972, 1967, and 1963 editions of the *Input-output Structure of the U.S. Economy* published by the U.S. Department of Commerce, Bureau of Economic Analysis. State and regional estimates of value added were based on unpublished data from the U.S. Department of Commerce, Bureau of Economic Analysis showing income in water transportation by place of work. Estimates of value added attributed to timber were derived by adjusting the value added in water transportation by the proportion of total domestic freight revenues for inland, coastal, and maritime carriers by water that were derived from timber products (10.3 percent in 1972, 11.3 percent in 1967, and 17.1 percent in 1963). These ratios were calculated from data on water freight revenues by commodity class (and region for 1963) published by the U.S. Interstate Commerce Commission, Bureau of Accounts in the 1972, 1967, and 1963 editions of *Freight Commodity Statistics*.

Sources for Table A-37, page 68.

Sources: *Retail trade*—Estimates of total U.S. value added were derived from unpublished data on gross product originating in retail trade from the U.S. Department of Commerce, Bureau of Economic Analysis, and various issues of the *Survey of Current Business* published by the U.S. Department of Commerce, containing the “National income and product accounts of the United States.” Estimates for States and regions were derived by distributing total value added according to total employee compensation in retail trade from payroll data in the 1972, 1967, and 1963 *Censuses of Retail Trade*. Estimates of value added attributed to timber were calculated by adjusting total value added in retail trade by the estimated proportion of sales that were derived from timber products. These ratios were calculated, by State, from data on sales by merchandise line from the 1972, 1967, and 1963 *Censuses of Retail Trade*.

Wholesale trade—Estimates of total U.S. value added were derived from unpublished data on gross product originating in wholesale trade from the U.S. Department of Commerce, Bureau of Economic Analysis, and various issues of the *Survey of Current Business* published by the U.S. Department of Commerce, containing the “National income and product accounts of the United States.” Estimates for States and regions were derived by distributing total value added according to total employee compensation in wholesale trade from payroll data in the 1972, 1967, and 1963 *Censuses of Wholesale Trade*. Estimates of value added attributed to timber were derived by adjusting total value added by the estimated proportion of total sales that were derived from timber products. These ratios were calculated from data on sales by commodity class and region from the *Censuses of Wholesale Trade*. Separate estimates were made for merchant wholesalers, and merchandise agents and brokers, and manufacturer's sales branches and sales offices, and incorporated in the final ratios for all wholesale trade.

Table A-33.—Estimated value added and value added attributed to timber in construction in the United States, by region and State, 1972, 1967, and 1963
(Thousand dollars)

Region and State	1963				1967				1972				1963			
	1972		1967		Value added		Value added		Value added		Value added		Value added		Value added	
	Total	Attributed to timber	Total	Attributed to timber	Total	Attributed to timber	Total	Attributed to timber	Total	Attributed to timber	Total	Attributed to timber	Total	Attributed to timber	Total	Attributed to timber
<i>South Central:</i>																
North:																
Northeast:																
Maine	316,200	50,600	166,100	19,930	126,900	19,700	911,900	118,500	557,550	66,900	444,950	57,850				
New Hampshire	317,100	57,100	158,100	25,300	110,450	17,150	1,302,650	169,350	789,600	102,650	586,450	76,200				
Vermont	140,600	26,700	82,400	15,650	51,450	8,000	604,250	142,150	604,250	72,900	435,300	56,600				
Massachusetts	2,487,150	323,550	1,384,850	180,000	1,128,800	174,920	518,750	83,000	306,300	45,900	217,950	28,350				
Rhode Island	387,850	50,450	240,800	33,700	176,750	27,400	306,200	81,500	306,650	232,600	30,250					
Connecticut	1,345,650	201,850	907,350	145,150	743,700	115,250	1,412,700	183,650	940,650	112,900	503,850	65,500				
New York	6,550,800	856,800	4,502,650	918,650	4,310,100	701,000	884,500	123,850	510,200	61,200	490,800	63,800				
New Jersey	2,725,300	408,000	1,821,100	1,498,800	232,300	348,700	5,018,400	702,600	3,051,350	217,1350	282,250					
Pennsylvania	4,648,400	557,800	3,015,250	361,850	2,988,550	348,700	11,573,300	1,604,600	7,067,150	834,400	5,083,250	660,800				
Total	18,959,250	2,533,650	12,257,900	1,973,550	10,445,500	1,644,450	24,447,550	3,813,250	13,875,200	1,807,050	10,256,300	1,339,400				
<i>Total, South</i>																
North Central:																
Ohio	3,659,250	548,900	2,572,700	334,450	1,917,300	295,250	218,150	26,200	141,700	17,000	139,700	23,050				
Indiana	1,754,950	245,550	1,210,550	157,400	833,000	128,300	345,100	44,900	206,050	20,600	171,350	28,300				
Illinois	4,624,700	693,700	3,274,850	327,500	2,503,550	385,550	150,150	18,100	79,950	4,000	101,150	16,700				
Michigan	3,065,700	459,650	2,192,850	307,000	1,470,550	226,450	1,468,350	246,350	619,100	66,650	577,400	95,250				
Wisconsin	2,266,100	1,008,300	1,205,950	151,200	759,150	116,900	345,300	65,600	182,350	23,750	186,050	30,650				
Minnesota	1,561,250	202,950	1,054,650	84,400	811,650	125,000	1,247,000	74,750	386,350	54,050	418,550	69,100				
Iowa	79,350	103,200	634,300	82,450	467,000	71,950	487,750	72,850	233,500	25,650	262,450	43,300				
Missouri	1,616,100	258,350	1,084,550	151,850	945,000	145,100	416,300	83,250	220,950	24,350	385,800	63,650				
North Dakota	189,050	20,750	128,050	12,800	144,200	22,200										
South Dakota	170,600	20,500	117,000	11,700	154,100	23,700										
Nebraska	581,150	87,250	373,950	41,150	342,700	52,800										
Kansas	124,400	101,450	483,550	53,400	470,000	72,400										
Total	20,153,500	2,968,750	14,137,300	1,715,300	10,818,200	1,665,600	1,339,450	174,100	1,028,500	133,750	728,650	120,250				
Total, North	39,112,750	5,502,400	26,165,000	3,688,850	21,263,700	3,310,050	8,513,900	1,362,200	5,689,300	739,600	5,922,950	978,900				
South:																
Delaware	356,400	39,200	268,400	21,450	227,250	29,500	Total, West	16,041,100	2,631,600	9,678,200	1,242,900	9,618,900	1,587,150			
Maryland	1,967,350	295,900	1,032,200	154,850	835,300	108,600	Total, United States	79,601,400	11,947,250	49,969,900	6,732,800	41,138,900	6,236,600			
Virginia	1,696,350	305,400	976,350	136,550	846,900	110,100										
West Virginia	425,150	55,250	287,400	23,000	183,200	23,800										
North Carolina	1,733,450	277,350	987,600	128,400	684,950	89,000										
South Carolina	972,250	145,850	636,100	76,350	405,50	58,800										
Georgia	1,802,050	306,000	981,050	127,550	695,600	90,450										
Florida	3,923,050	784,600	1,636,950	278,300	1,294,800	168,350										
Total	12,874,250	2,208,650	6,808,050	966,450	5,173,050	678,600										

Note: The data shown in this table are estimates of total value added in construction including value added for establishments classified in the construction industries (SIC's 15, 16 and 18) and those engaged in construction activity performed by the labor force of nonconstruction establishment for itself, or by other entities such as Federal, State, or local governments, or individual property owners for themselves. Value added in both new and maintenance and repair construction is included.

Sources: Estimates of construction industry value added for 1972 and 1967 (\$72.4 billion and \$45.0 billion, respectively), by State and region, were derived from data in the U.S. Department of Commerce, Bureau of the Census, 1972 and 1967 *Census of construction industries*. Estimates of construction industry value added for 1963 (\$33.7 billion) were based on the value added by State calculated for 1967 modified by the ratio of State income from contract construction in 1963 to State income from contract construction in 1967. These data were derived from unpublished tabulations of the U.S. Department of Commerce, Bureau of Economic Analysis. Estimates of nonconstruction industry value added (\$7.2 billion in 1972 and \$7.4 billion in 1967, and \$7.4 billion in 1963) were based on data in *Economics of the construction industry*, published by the Conference Board, and distributed by State according to construction industry value added. Estimates of value added attributed to timber in construction for 1972 and 1967 were calculated from total construction value added by State and the ratios of timber products construction materials cost to all construction materials cost by type of construction and State. These ratios were derived from data contained in reports on labor and materials requirements in various types of construction published by the U.S. Department of Labor Bureau of Labor Statistics, and the volume of construction products used by type of construction and total value added by State.

Table A-34.—Estimated employment and employment attributed to timber in construction in the United States, by region and State, 1972, 1967, and 1963
(Number)

Region and State	1972			1967			1963			1967			1963		
	Employment		Total	Employment		Total	Attributed to timber		Total	Employment		Total	Attributed to timber		Total
	Total	Attributed to timber	Total	Total	Attributed to timber	Total	Total	Attributed to timber	Total	Total	Attributed to timber	Total	Total	Attributed to timber	Total
North:															
Northeast:															
Maine	27,650	4,450	21,150	2,550	20,550	3,150	71,150	9,250	62,450	7,500	70,350	9,150	80,700	10,500	10,500
New Hampshire	25,350	4,550	17,550	2,850	16,100	2,500	55,450	15,650	98,450	12,800	83,000	6,200	83,400	8,250	8,250
Vermont	13,600		10,300	2,050	9,750	1,400	49,550	7,800	36,300	5,150	46,200	6,050	59,650	6,200	6,200
Massachusetts	145,830	18,950	123,400	16,050	123,100	19,100	104,750	7,900	41,000	5,150	79,100	10,300	10,300	10,300	10,300
Rhode Island	25,400		23,500	3,300	18,850	2,950	82,850	12,850	74,900	10,500	59,750	7,150	62,100	8,050	8,050
Connecticut	79,430	11,950	73,700	11,800	82,400	12,850	47,200	34,600	400,600	56,100	327,100	33,150	255,350	33,150	33,150
New York	360,630	46,850	363,400	47,200	22,400	14,700	946,900	132,850	787,750	93,400	696,850	90,650	90,650		
New Jersey	155,400	23,300	149,300	22,950	147,200	22,950									
Pennsylvania	297,800	35,700	284,650	34,150	216,150	33,450									
Total	1,131,150	151,650	1,067,350	147,350	1,019,200	158,000									
West:															
Mountain:															
Montana															
Idaho	15,300														
Wyoming	23,550														
Colorado	8,000														
New Mexico	95,550														
Arizona	28,950														
Utah	65,500														
Nevada	32,100														
Total	22,000														
West, South:															
South Dakota	13,650														
Nebraska	40,750	6,100	36,700	4,050	39,700	6,100									
Kansas	53,800	7,550	50,900	5,600	54,400	8,350									
Total	1,272,200	187,000	1,196,250	145,650	1,102,950	169,900									
Total, North	2,403,350	338,650	2,264,000	288,000	2,122,150	327,900									
South:															
Southeast:															
Delaware	22,700	2,550	24,650	2,000	18,950	2,500									
Maryland	128,850	19,350	99,900	15,000	98,650	12,800									
Virginia	141,750	25,500	116,800	14,000	119,700	15,550									
West Virginia	29,750	3,850	29,350	4,100	28,250	3,650									
North Carolina	165,100	26,450	129,600	16,850	107,450	13,950									
South Carolina	92,300	13,850	69,100	8,300	52,150	6,800									
Georgia	147,450	25,050	112,850	13,350	94,100	12,250									
Florida	290,450	58,100	166,850	6,450	173,100	22,500									
Total	1,018,350	174,700	748,900	80,250	692,350	90,000									

¹ Less than 500 employees.

Note: The data shown in this table are estimates of total construction employment, including employees of establishments classified in the construction industries (SIC's 15, 16, and 18) and those engaged in construction activity performed by the labor force of a nonconstruction establishment for itself, or local governments, or individual property owners for themselves. Employment in both new and maintenance and repair construction is included.

Sources: Estimates of construction industry employment for 1972 and 1967 (\$4.8 million, respectively), by State and region, were derived from data in the U.S. Department of Commerce, Bureau of Labor Statistics, 1972 and 1967 *Censuses of construction industries*. Estimates of construction industry employment for 1963 (\$3.6 million) were based on the number of employees in contract construction, modified by the ratio of construction employment to nonconstruction employment the 1967 *Census of construction industries*. Estimates of nonconstruction industry employment (475,000 in 1972, 450,000 in 1967, and 380,000 in 1963) were based on data in *Economics of the construction industry* published by the Conference Board. Estimates of employment attributed to timber in construction for 1972 and 1967 were calculated from total construction employment by State and the ratios of timber products construction materials cost to all construction materials cost contained in reports on labor and materials requirements in various types of construction published by the U.S. Department of Labor, Bureau of Labor Statistics, and the volume of construction by type contained in the 1972 *Census of construction industries*. Estimates of employment attributed to timber in 1967 were based on the State ratios for 1967 *Census of construction industries*. Estimates of employment attributed to timber for 1963 were based on the State ratios for 1963 modified to account for trends in timber products use by type of construction and total employment by State.

Table A-35.—Estimated value added and value added attributed to timber in transportation and marketing in the United States, by region and State, 1972, 1967, and 1963
 (Thousands of dollars)

Region and State	1972						1967					
	Total		Transportation		Marketing		Total		Transportation		Marketing	
	Value added	Value added attributed to timber	Value added	Value added attributed to timber	Value added	Value added attributed to timber	Value added	Value added attributed to timber	Value added	Value added attributed to timber	Value added	Value added attributed to timber
North:												
Northeast:												
Maine	599,000	28,000	126,000	9,000	473,000	19,000	492,000	21,000	85,000	6,000	407,000	15,000
New Hampshire	600,000	31,000	59,000	4,000	541,000	27,000	343,000	16,000	34,000	2,000	309,000	14,000
Vermont	353,000	18,000	54,000	4,000	299,000	14,000	211,000	10,000	33,000	2,000	178,000	8,000
Massachusetts	5,706,000	250,000	654,000	42,000	5,052,000	208,000	3,836,000	183,000	444,000	29,000	3,392,000	154,000
Rhode Island	786,000	37,000	96,000	6,000	690,000	31,000	540,000	25,000	66,000	4,000	474,000	21,000
Connecticut	2,841,000	137,000	293,000	19,000	2,548,000	118,000	1,846,000	91,000	200,000	16,000	1,646,000	75,000
New York	20,021,000	965,000	2,384,000	174,000	17,637,000	791,000	14,815,000	831,000	2,091,000	167,000	12,724,000	664,000
New Jersey	8,101,000	337,000	1,437,000	95,000	6,664,000	242,000	4,949,000	234,000	932,000	66,000	4,017,000	168,000
Pennsylvania	10,598,000	458,000	2,115,000	149,000	8,483,000	309,000	7,304,000	348,000	1,472,000	104,000	5,832,000	244,000
Total	49,605,000	2,261,000	7,218,800	502,000	42,387,000	1,759,000	34,336,000	1,759,000	5,357,000	396,000	28,979,000	1,363,000
North Central:												
Ohio	10,202,000	418,000	1,977,000	135,000	8,225,000	283,000	6,855,000	326,000	1,257,000	87,000	5,598,000	239,000
Indiana	4,613,000	191,000	849,000	58,000	3,764,000	133,000	3,098,000	138,000	548,000	36,000	2,550,000	102,000
Illinois	12,764,000	543,000	2,220,000	157,000	10,544,000	386,000	9,110,000	376,000	1,607,000	112,000	7,503,000	264,000
Michigan	7,657,000	307,000	1,043,000	70,000	6,614,000	237,000	5,194,000	227,000	708,000	47,000	4,486,000	180,000
Wisconsin	3,772,000	182,000	633,000	58,000	3,139,000	124,000	2,473,000	124,000	382,000	36,000	2,091,000	88,000
Minnesota	3,898,000	207,000	713,000	78,000	3,185,000	129,000	2,504,000	131,000	424,000	46,000	2,080,000	85,000
Iowa	2,511,000	109,000	471,000	46,000	2,040,000	63,000	1,621,000	75,000	262,000	27,000	1,359,000	48,000
Missouri	4,923,000	230,000	955,000	94,000	3,968,000	136,000	3,382,000	169,000	617,000	60,000	2,765,000	109,000
North Dakota	531,000	28,000	99,000	12,000	432,000	16,000	352,000	17,000	62,000	8,000	290,000	9,000
South Dakota	486,000	19,000	88,000	7,000	398,000	12,000	313,000	13,000	43,000	4,000	270,000	9,000
Nebraska	1,526,000	83,000	385,000	46,000	1,141,000	37,000	974,000	54,000	217,000	27,000	757,000	27,000
Kansas	2,048,000	109,000	516,000	61,000	1,532,000	48,000	1,304,000	71,000	322,000	38,000	982,000	33,000
Total	54,931,000	2,426,000	9,949,000	822,000	44,982,000	1,604,000	37,180,000	1,721,000	6,449,000	528,000	30,731,000	1,193,000
Total, North	104,536,000	4,687,000	17,167,000	1,324,000	87,369,000	3,363,000	71,516,000	3,480,000	11,806,000	924,000	59,710,000	2,556,000
South:												
Southeast:												
Delaware	642,000	24,000	84,000	6,000	558,000	18,000	413,000	19,000	64,000	6,000	349,000	13,000
Maryland	4,517,000	191,000	704,000	50,000	3,813,000	141,000	3,000,000	140,000	498,000	36,000	2,502,000	104,000
Virginia	3,919,000	256,000	774,000	79,000	3,145,000	177,000	2,323,000	133,000	491,000	51,000	1,832,000	82,000
West Virginia	1,234,000	68,000	301,000	35,000	933,000	33,000	832,000	52,000	218,000	26,000	614,000	26,000
North Carolina	4,338,000	228,000	830,000	64,000	3,508,000	164,000	2,524,000	136,000	471,000	36,000	2,053,000	100,000
South Carolina	1,744,000	94,000	305,000	28,000	1,439,000	66,000	972,000	49,000	158,000	14,000	814,000	35,000
Georgia	4,530,000	258,000	782,000	74,000	3,748,000	184,000	2,633,000	145,000	454,000	42,000	2,179,000	103,000
Florida	6,876,000	318,000	862,000	79,000	6,014,000	239,000	3,675,000	175,000	447,000	43,000	3,228,000	132,000
Total	27,800,000	1,437,000	4,642,000	415,000	23,158,000	1,022,000	16,372,000	849,000	2,801,000	254,000	13,571,000	595,000
South Central:												
Kentucky	2,339,000	123,000	524,000	59,000	1,815,000	64,000	1,422,000	81,000	324,000	36,000	1,098,000	45,000
Tennessee	3,515,000	171,000	689,000	61,000	2,826,000	110,000	2,083,000	109,000	394,000	37,000	1,689,000	72,000
Alabama	2,433,000	144,000	480,000	47,000	1,953,000	97,000	1,468,000	82,000	296,000	29,000	1,172,000	53,000
Mississippi	1,151,000	65,000	253,000	24,000	188,000	41,000	757,000	43,000	136,000	14,000	621,000	29,000
Arkansas	1,323,000	73,000	310,000	32,000	1,013,000	41,000	793,000	41,000	186,000	18,000	607,000	23,000
Louisiana	3,130,000	164,000	756,000	75,000	2,374,000	89,000	2,051,000	118,000	548,000	57,000	1,503,000	61,000
Oklahoma	1,985,000	90,000	339,000	28,000	1,646,000	62,000	1,199,000	55,000	182,000	15,000	1,017,000	40,000
Texas	10,824,000	516,000	1,901,000	179,000	8,923,000	337,000	6,565,000	326,000	1,247,000	120,000	5,318,000	206,000
Total	26,700,000	1,346,000	5,252,000	505,000	21,448,000	841,000	16,338,000	855,000	3,313,000	326,000	13,025,000	529,000
Total, South	54,500,000	2,783,000	9,894,000	920,000	44,606,000	1,863,000	32,710,000	1,704,000	6,114,000	580,000	26,596,000	1,124,000
West:												
Mountain:												
Montana	651,000	44,000	175,000	22,000	476,000	22,000	423,000	24,000	107,000	13,000	316,000	11,000
Idaho	643,000	40,000	132,000	15,000	511,000	25,000	393,000	20,000	74,000	9,000	319,000	11,000
Wyoming	312,000	20,000	102,000	13,000	210,000	7,000	190,000	12,000	64,000	8,000	126,000	4,000
Colorado	2,335,000	120,000	328,000	31,000	2,007,000	89,000	1,322,000	65,000	210,000	21,000	1,112,000	44,000
New Mexico	732,000	40,000	122,000	13,000	610,000	27,000	452,000	24,000	84,000	9,000	368,000	15,000
Arizona	1,618,000	78,000	171,000	17,000	1,447,000	61,000	857,000	38,000	102,000	11,000	755,000	27,000
Utah	998,000	55,000	220,000	22,000	778,000	33,000	612,000	37,000	139,000	15,000	473,000	22,000
Nevada	528,000	25,000	66,000	7,000	462,000	18,000	303,000	15,000	43,000	5,000	260,000	10,000
Total	7,817,000	422,000	1,316,000	140,000	6,501,000	282,000	4,552,000	235,000	823,000	91,000	3,729,000	144,000
Pacific:												
Washington	3,316,000	232,000	569,000	59,000	2,747,000	173,000	2,276,000	155,000	395,000	41,000	1,881,000	114,000
Oregon	2,395,000	189,000	448,000	44,000	1,947,000	145,000	1,498,000	129,000	290,000	30,000	1,208,000	99,000
California	20,550,000	925,000	2,558,000	233,000	17,992,000	692,000	13,737,000	677,000	1,725,000	162,000	12,012,000	515,000
Alaska	302,000	17,000	43,000	3,000	259,000	14,000	160,000	8,000	26,000	2,000	134,000	6,000
Hawaii	755,000	32,000	75,000	6,000	680,000	26,000	445,000	21,000	54,000	5,000	391,000	16,000
Total	27,318,000	1,395,000	3,693,000	345,000	23,625,000	1,050,000	18,116,000	990,000	2,490,000	240,000	15,626,000	750,000
Total, West	35,135,000	1,817,000	5,009,000	485,000	30,126,000	1,332,000	22,668,000	1,225,000	3,313,000	331,000	19,355,000	894,000
Total, United States	194,171,000	9,287,000	32,070,000	2,729,000	162,101,000	6,558,000	126,894,000	6,409,000	21,233,000	1,835,000	105,661,000	4,574,000

Sources: See tables A-36 and A-37.

Table A-35.—Estimated value added and value added attributed to timber in transportation and marketing in the United States, by region and State, 1972, 1967, and 1963
 (Thousand dollars)

Region and State	1963					
	Total		Transportation		Marketing	
	Value added	Value added attributed to timber	Value added	Value added attributed to timber	Value added	Value added attributed to timber
North:						
Northeast:						
Maine	391,000	25,000	73,000	13,000	318,000	12,000
New Hampshire	245,000	14,000	29,000	3,000	216,000	11,000
Vermont	154,000	10,000	32,000	5,000	122,000	5,000
Massachusetts	2,995,000	184,000	376,000	46,000	2,619,000	138,000
Rhode Island	407,000	24,000	53,000	6,000	354,000	18,000
Connecticut	1,366,000	80,000	161,000	22,000	1,205,000	58,000
New York	11,895,000	741,000	1,778,000	195,000	10,117,000	546,000
New Jersey	3,708,000	207,000	712,000	67,000	2,996,000	140,000
Pennsylvania	5,685,000	309,000	1,256,000	114,000	4,428,000	195,000
Total	26,845,000	1,594,000	4,470,000	471,000	22,375,000	1,123,000
North Central:						
Ohio	5,184,000	258,000	1,018,000	81,000	4,166,000	177,000
Indiana	2,290,000	113,000	435,000	32,000	1,855,000	81,000
Illinois	6,816,000	336,000	1,323,000	101,000	5,493,000	235,000
Michigan	3,695,000	171,000	535,000	45,000	3,160,000	126,000
Wisconsin	1,846,000	116,000	304,000	45,000	1,542,000	71,000
Minnesota	1,920,000	132,000	336,000	61,000	1,584,000	71,000
Iowa	1,239,000	75,000	214,000	38,000	1,025,000	37,000
Missouri	2,635,000	135,000	500,000	48,000	2,135,000	87,000
North Dakota	288,000	20,000	54,000	11,000	234,000	9,000
South Dakota	263,000	15,000	39,000	6,000	224,000	9,000
Nebraska	789,000	49,000	193,000	25,000	596,000	24,000
Kansas	1,033,000	61,000	265,000	34,000	768,000	27,000
Total	27,998,000	1,481,000	5,216,000	527,000	22,782,000	954,000
Total, North	54,843,000	3,075,000	9,686,000	998,000	45,157,000	2,077,000
South:						
Southeast:						
Delaware	294,000	16,000	50,000	4,000	244,000	12,000
Maryland	2,308,000	119,000	408,000	36,000	1,900,000	83,000
Virginia	1,728,000	90,000	383,000	29,000	1,345,000	61,000
West Virginia	660,000	32,000	179,000	12,000	481,000	20,000
North Carolina	1,770,000	100,000	333,000	32,000	1,437,000	68,000
South Carolina	674,000	38,000	117,000	13,000	557,000	25,000
Georgia	1,842,000	110,000	354,000	41,000	1,488,000	69,000
Florida	2,526,000	124,000	322,000	39,000	2,204,000	85,000
Total	11,802,000	629,000	2,146,000	206,000	9,656,000	423,000
South Central:						
Kentucky	1,087,000	71,000	262,000	36,000	825,000	35,000
Tennessee	1,505,000	89,000	301,000	34,000	1,204,000	55,000
Alabama	1,111,000	69,000	241,000	30,000	870,000	39,000
Mississippi	562,000	35,000	111,000	14,000	451,000	21,000
Arkansas	606,000	34,000	145,000	14,000	461,000	20,000
Louisiana	1,468,000	96,000	401,000	52,000	1,067,000	44,000
Oklahoma	959,000	48,000	148,000	13,000	811,000	35,000
Texas	4,944,000	264,000	942,000	99,000	4,002,000	165,000
Total	12,242,000	706,000	2,551,000	292,000	9,691,000	414,000
Total, South	24,044,000	1,335,000	4,697,000	498,000	19,347,000	837,000
West:						
Mountain:						
Montana	348,000	29,000	88,000	18,000	260,000	11,000
Idaho	328,000	19,000	72,000	9,000	256,000	10,000
Wyoming	177,000	12,000	59,000	8,000	118,000	4,000
Colorado	1,072,000	59,000	186,000	21,000	886,000	38,000
New Mexico	388,000	23,000	75,000	9,000	313,000	14,000
Arizona	683,000	34,000	89,000	10,000	594,000	24,000
Utah	511,000	35,000	111,000	14,000	400,000	21,000
Nevada	231,000	14,000	37,000	4,000	194,000	10,000
Total	3,738,000	225,000	717,000	93,000	3,021,000	132,000
Pacific:						
Washington	1,680,000	140,000	300,000	49,000	1,380,000	91,000
Oregon	1,133,000	109,000	223,000	36,000	910,000	73,000
California	10,608,000	610,000	1,374,000	155,000	9,234,000	455,000
Alaska	588,000	27,000	22,000	3,000	566,000	24,000
Hawaii	314,000	19,000	44,000	5,000	270,000	14,000
Total	14,323,000	905,000	1,963,000	248,000	12,360,000	657,000
Total, West	18,061,000	1,130,000	2,680,000	341,000	15,381,000	789,000
Total, United States	96,948,000	5,540,000	17,063,000	1,837,000	79,885,000	3,703,000

Sources: See tables A-36 and A-37.

**Table A-36—Estimated value added and value added attributed to timber in transportation in the United States,
by industry and region, 1972, 1967, and 1963**

(Thousand dollars)

Region	Total		Railroad		Truck		Water	
	Value added	Value added attributed to timber	Value added	Value added attributed to timber	Value added	Value added attributed to timber	Value added	Value added attributed to timber
1972								
North:								
Northeast	7,218,000	502,000	1,691,000	148,000	4,673,000	266,000	854,000	88,000
North Central	9,949,000	822,000	3,757,000	457,000	5,914,000	337,000	278,000	28,000
Total	17,167,000	1,324,000	5,448,000	605,000	10,587,000	603,000	1,132,000	116,000
South:								
Southeast	4,642,000	415,000	1,359,000	209,000	2,878,000	164,000	405,000	42,000
South Central	5,252,000	505,000	1,580,000	264,000	2,959,000	168,000	713,000	73,000
Total	9,894,000	920,000	2,939,000	473,000	5,837,000	332,000	1,118,000	115,000
West:								
Mountain	1,316,000	140,000	591,000	99,000	722,000	41,000	3,000	—
Pacific	3,693,000	345,000	1,033,000	172,000	2,206,000	126,000	454,000	47,000
Total	5,009,000	485,000	1,624,000	271,000	2,928,000	167,000	457,000	47,000
Total, United States	32,070,000	2,729,000	10,011,000	1,349,000	19,352,000	1,102,000	2,707,000	278,000
1967								
North:								
Northeast	5,357,000	396,000	1,452,000	118,000	2,885,000	162,000	1,020,000	116,000
North Central	6,449,000	528,000	2,776,000	310,000	3,470,000	195,000	203,000	23,000
Total	11,806,000	924,000	4,228,000	428,000	6,355,000	357,000	1,223,000	139,000
South:								
Southeast	2,801,000	254,000	965,000	134,000	1,556,000	88,000	280,000	32,000
South Central	3,313,000	326,000	1,054,000	163,000	1,631,000	92,000	628,000	71,000
Total	6,114,000	580,000	2,019,000	297,000	3,187,000	180,000	908,000	103,000
West:								
Mountain	823,000	91,000	441,000	69,000	381,000	22,000	1,000	—
Pacific	2,490,000	240,000	738,000	115,000	1,291,000	73,000	461,000	52,000
Total	3,313,000	331,000	1,179,000	184,000	1,672,000	95,000	462,000	52,000
Total, United States	21,233,000	1,835,000	7,426,000	909,000	11,214,000	632,000	2,593,000	294,000
1963								
North:								
Northeast	4,470,000	471,000	1,370,000	168,000	2,283,000	163,000	817,000	140,000
North Central	5,216,000	527,000	2,462,000	314,000	2,602,000	187,000	152,000	26,000
Total	9,686,000	998,000	3,832,000	482,000	4,885,000	350,000	969,000	166,000
South:								
Southeast	2,146,000	206,000	838,000	93,000	1,109,000	79,000	199,000	34,000
South Central	2,551,000	292,000	938,000	135,000	1,197,000	86,000	416,000	71,000
Total	4,697,000	498,000	1,776,000	228,000	2,306,000	165,000	615,000	105,000
West:								
Mountain	717,000	93,000	396,000	70,000	320,000	23,000	1,000	—
Pacific	1,963,000	248,000	622,000	119,000	1,012,000	72,000	329,000	57,000
Total	2,680,000	341,000	1,018,000	189,000	1,332,000	95,000	330,000	57,000
Total, United States	17,063,000	1,837,000	6,626,000	899,000	8,523,000	610,000	1,914,000	328,000

See footnotes on page 62.

**Table A-37—Estimated value added and value added attributed to timber in marketing in the United States,
by industry and region, 1972, 1967, and 1963**

Region	(Thousand dollars)					
	Total		Retail Trade		Wholesale Trade	
	Value added	Value added attributed to timber	Value added	Value added attributed to timber	Value added	Value added attributed to timber
1972						
North:						
Northeast	42,387,000	1,759,000	22,775,000	808,000	19,632,000	951,000
North Central	44,982,000	1,604,000	24,911,000	955,000	20,071,000	649,000
Total	87,369,000	3,363,000	47,666,000	1,763,000	39,703,000	1,600,000
South:						
Southeast	23,158,000	1,022,000	13,984,000	612,000	9,174,000	410,000
South Central	21,448,000	841,000	12,059,000	502,000	9,389,000	339,000
Total	44,606,000	1,863,000	26,043,000	1,114,000	18,563,000	749,000
West:						
Mountain	6,501,000	282,000	4,051,000	185,000	2,450,000	97,000
Pacific	23,625,000	1,050,000	13,875,000	499,000	9,750,000	551,000
Total	30,126,000	1,332,000	17,926,000	684,000	12,200,000	648,000
Total, United States	162,101,000	6,558,000	91,635,000	3,561,000	70,466,000	2,997,000
1967						
North:						
Northeast	28,979,000	1,363,000	15,830,000	753,000	13,149,000	610,000
North Central	30,731,000	1,194,000	17,866,000	828,000	12,865,000	366,000
Total	59,710,000	2,557,000	33,696,000	1,581,000	26,014,000	976,000
South:						
Southeast	13,571,000	595,000	8,334,000	376,000	5,237,000	219,000
South Central	13,025,000	529,000	7,730,000	366,000	5,295,000	163,000
Total	26,596,000	1,124,000	16,064,000	742,000	10,532,000	382,000
West:						
Mountain	3,729,000	144,000	2,423,000	105,000	1,306,000	39,000
Pacific	15,626,000	749,000	9,441,000	385,000	6,185,000	364,000
Total	19,355,000	893,000	11,864,000	490,000	7,491,000	403,000
Total, United States	105,661,000	4,574,000	61,624,000	2,813,000	44,037,000	1,761,000
1963						
North:						
Northeast	22,375,000	1,123,000	12,136,000	559,000	10,239,000	564,000
North Central	22,782,000	954,000	13,099,000	632,000	9,683,000	322,000
Total	45,157,000	2,007,000	25,235,000	1,191,000	19,922,000	886,000
South:						
Southeast	9,656,000	423,000	5,884,000	263,000	3,772,000	160,000
South Central	9,691,000	415,000	5,657,000	274,000	4,034,000	141,000
Total	19,347,000	838,000	11,541,000	537,000	7,806,000	301,000
West:						
Mountain	3,021,000	132,000	1,948,000	92,000	1,073,000	40,000
Pacific	12,360,000	656,000	7,087,000	310,000	5,273,000	346,000
Total	15,381,000	788,000	9,035,000	402,000	6,346,000	386,000
Total, United States	79,885,000	3,703,000	45,811,000	2,130,000	34,074,000	1,573,000

See sources on page 62.

Table A-38.—Estimated employment and employment attributed to timber in transportation and marketing in the United States, by region and State, 1972, 1967, and 1963

(Number)

Region and State	1972						1967					
	Total		Transportation		Marketing		Total		Transportation		Marketing	
	Employment	Employment attributed to timber	Employment	Employment attributed to timber	Employment	Employment attributed to timber	Employment	Employment attributed to timber	Employment	Employment attributed to timber	Employment	Employment attributed to timber
North:												
Northeast:												
Maine	84,300	3,950	7,500	950	76,800	3,000	71,400	3,450	6,800	800	64,600	2,650
New Hampshire	64,850	3,400	3,450	500	61,400	2,900	50,750	2,550	2,850	—	47,900	2,200
Vermont	37,750	2,100	2,900	—	34,850	1,700	31,050	1,650	2,500	—	28,550	1,350
Massachusetts	704,850	33,000	39,050	5,450	665,800	27,550	491,350	26,400	38,200	4,900	453,150	21,500
Rhode Island	80,400	4,100	5,800	800	74,600	3,300	73,800	4,050	5,600	750	68,200	3,300
Connecticut	267,800	13,200	17,550	2,400	250,250	10,800	234,100	12,600	17,300	2,100	216,800	10,500
New York	1,634,650	70,600	146,000	10,600	1,488,650	60,000	1,671,850	96,200	182,400	19,250	1,489,450	76,950
New Jersey	680,850	27,250	87,100	5,750	593,750	21,500	597,850	32,100	81,450	8,700	516,400	23,400
Pennsylvania	1,037,500	41,800	126,450	8,800	911,050	33,000	977,300	51,400	127,750	12,750	849,550	38,650
Total	4,592,950	199,400	435,800	35,650	4,157,150	163,750	4,199,450	230,400	464,850	49,900	3,734,600	180,500
North Central:												
Ohio	963,150	35,150	116,650	6,100	846,500	29,050	858,000	39,500	109,100	6,200	748,900	33,300
Indiana	466,900	17,700	50,450	2,650	416,450	15,050	420,050	18,950	47,850	2,550	372,200	16,400
Illinois	1,107,950	42,350	127,900	7,150	980,050	35,200	1,060,750	46,150	136,600	7,850	924,150	38,300
Michigan	718,000	26,850	60,300	3,000	657,700	23,850	659,150	29,700	60,450	3,100	598,700	26,600
Wisconsin	400,400	17,550	36,900	3,250	363,500	14,300	354,500	17,900	32,750	3,100	321,750	14,800
Minnesota	377,500	18,550	41,250	4,300	336,250	14,250	328,800	17,600	36,250	4,050	292,550	13,550
Iowa	268,150	10,600	26,850	2,100	241,300	8,500	244,300	11,100	22,450	1,950	221,850	9,150
Missouri	461,550	18,650	56,000	4,550	405,550	14,100	429,500	20,550	53,900	4,350	375,600	16,200
North Dakota	56,500	2,700	5,750	700	50,750	2,000	52,050	2,550	5,550	700	46,550	1,850
South Dakota	58,200	2,200	5,200	—	53,000	1,800	51,750	2,200	3,700	—	48,050	1,850
Nebraska	159,300	7,500	22,400	2,400	136,900	5,100	141,650	7,050	19,450	2,200	122,200	4,850
Kansas	213,700	9,650	29,600	3,150	184,000	6,500	193,350	9,400	28,500	3,050	164,850	6,350
Total	5,251,300	209,450	579,250	39,750	4,672,050	169,700	4,793,850	222,650	556,500	39,450	4,237,350	183,200
Total, North	9,844,250	408,850	1,015,050	75,400	8,829,200	333,450	8,993,300	453,050	1,021,350	89,350	7,971,950	363,700
South:												
Southeast:												
Delaware	55,250	2,200	5,250	—	50,000	1,850	46,800	2,300	5,300	500	41,450	1,800
Maryland	425,550	16,350	43,350	3,050	382,200	13,300	387,000	27,950	48,400	4,500	338,600	23,450
Virginia	390,300	25,500	45,950	5,350	344,350	20,150	324,550	9,800	43,300	5,200	281,250	4,600
West Virginia	128,450	6,300	18,500	2,150	109,950	4,150	119,300	18,150	19,300	2,650	100,000	15,500
North Carolina	428,950	22,800	48,200	4,700	380,750	18,100	359,350	10,400	40,500	4,100	318,850	6,300
South Carolina	191,700	10,050	17,850	1,900	173,850	8,150	156,700	16,200	13,600	1,500	143,100	14,700
Georgia	429,750	23,150	45,050	4,950	384,700	18,200	353,250	25,150	38,750	4,350	314,500	20,800
Florida	722,150	32,100	51,650	5,450	670,500	26,650	536,550	7,650	38,350	4,300	498,200	3,350
Total	2,772,100	138,450	275,800	27,900	2,496,300	110,550	2,283,500	117,600	247,550	27,100	2,035,950	90,500
South Central:												
Kentucky	248,600	12,150	31,400	3,900	217,200	8,250	217,250	11,900	28,900	3,700	188,350	8,200
Tennessee	352,900	17,250	40,200	4,300	312,700	12,950	298,550	15,950	33,800	3,800	264,750	12,150
Alabama	257,700	14,100	27,800	3,100	229,900	11,000	224,500	12,050	24,750	2,800	199,800	9,250
Mississippi	149,950	7,600	14,750	1,600	135,200	6,000	126,700	6,750	11,700	3,350	115,000	5,400
Arkansas	149,650	7,400	17,500	1,800	132,150	5,600	133,000	6,300	16,100	1,500	116,900	4,800
Louisiana	314,500	14,950	48,700	4,850	265,800	10,100	281,700	15,150	48,400	4,900	233,300	10,250
Oklahoma	221,200	9,900	19,550	1,650	201,650	8,250	193,650	8,950	15,700	1,200	177,950	7,750
Texas	1,113,650	49,000	112,750	10,750	1,000,900	38,250	937,150	44,700	109,600	10,200	827,550	34,500
Total	2,808,150	132,350	312,650	31,950	2,495,500	100,400	2,412,550	121,750	288,950	29,450	2,123,600	92,300
Total, South	5,580,250	270,800	588,450	59,850	4,991,800	210,950	4,696,050	239,350	536,500	56,550	4,159,550	182,800
West:												
Mountain:												
Montana	67,550	3,750	9,850	1,200	57,700	2,550	59,250	2,900	9,550	1,100	49,700	1,800
Idaho	70,050	3,750	7,250	750	62,800	3,000	59,100	2,600	6,250	600	52,850	2,000
Wyoming	33,950	1,750	5,900	700	28,050	1,050	29,150	1,550	5,700	700	23,450	850
Colorado	232,050	11,500	18,700	1,600	213,350	9,900	179,950	8,350	17,750	1,450	162,200	6,900
New Mexico	86,500	4,150	7,050	700	79,450	3,450	71,750	3,400	7,500	750	64,250	2,650
Arizona	173,850	8,100	9,750	1,050	164,100	7,050	123,500	5,400	8,900	1,050	114,600	4,350
Utah	104,250	5,350	13,100	1,250	91,150	4,100	84,150	4,600	12,300	1,250	71,850	3,350
Nevada	51,000	2,300	3,750	—	47,250	1,850	37,350	1,750	3,750	—	33,600	1,300
Total	819,200	40,650	75,350	7,700	743,850	32,950	644,200	30,550	71,700	7,350	572,500	23,200
Pacific:												
Washington	304,300	19,500	34,600	3,850	269,700	15,650	272,800	16,900	35,100	4,050	237,700	12,850
Oregon	217,750	14,200	26,500	2,800	191,250	11,400	115,450	13,650	25,850	3,000	159,600	10,650
California	1,834,550	76,800	151,350	15,200	1,683,200	61,600	1,624,250	77,950	151,100	16,300	1,473,150	61,650
Alaska	23,400	1,350	2,800	—	20,600	1,100	15,800	900	2,400	—	13,400	650
Hawaii	83,150	3,000	4,850	—	78,300	2,600	63,450	2,750	4,950	500	58,500	2,250
Total	2,463,150	114,850	220,100	22,500	2,243,050	92,350	2,161,750	112,150	219,400	24,100	1,942,350	88,050
Total, West	3,282,350	155,500	295,450	30,200	2,986,900	125,300	2,805,950	142,700	291,100	31,450	2,514,850	111,250
Total, United States	18,706,850	835,150	1,898,950	165,450	16,807,900	669,700	16,495,300	835,100	1,848,938	177,350	14,646,350	657,750

¹ Less than 500 employees.

Sources: See tables A-39 and A-30.

Table A-38.—Estimated employment and employment attributed to timber in transportation and marketing in the United States, by region and State, 1972, 1967, and 1963—Continued
(Number)

Region and State	1963					
	Total		Transportation		Marketing	
	Employment	Employment attributed to timber	Employment	Employment attributed to timber	Employment	Employment attributed to timber
North:						
Northeast:						
Maine	69,850	4,000	8,050	1,550	61,800	2,450
New Hampshire	44,800	2,550	2,800	—	42,000	2,100
Vermont	27,750	1,600	3,000	600	24,750	1,000
Massachusetts	449,050	27,200	39,400	6,900	409,650	20,300
Rhode Island	66,650	4,000	5,550	950	61,100	3,050
Connecticut	207,500	12,300	17,100	3,100	190,400	9,200
New York	1,613,550	92,400	193,300	20,800	1,420,250	71,600
New Jersey	544,250	28,700	75,900	6,550	468,350	22,150
Pennsylvania	924,600	47,000	137,300	11,600	787,300	35,400
Total	3,948,000	219,750	482,400	52,500	3,465,600	167,250
North Central:						
Ohio	789,150	37,300	112,100	6,800	677,050	30,500
Indiana	379,200	17,950	48,050	2,600	331,150	15,350
Illinois	978,800	45,350	144,800	8,450	834,000	36,900
Michigan	585,600	26,050	57,000	3,600	528,600	22,450
Wisconsin	321,600	18,000	32,200	4,400	289,400	13,600
Minnesota	298,550	19,200	37,100	6,300	261,450	12,900
Iowa	223,800	11,800	23,000	3,500	200,800	8,300
Missouri	400,950	19,300	54,400	4,100	346,550	15,200
North Dakota	49,600	3,150	6,250	1,200	43,350	1,950
South Dakota	49,900	2,700	4,050	550	45,850	2,150
Nebraska	134,150	7,550	21,800	2,450	112,350	5,100
Kansas	177,650	9,000	29,450	3,250	148,200	5,750
Total	4,388,950	217,350	570,200	47,200	3,818,750	170,150
Total, North	8,336,950	437,100	1,052,600	99,700	7,284,350	337,400
South:						
Southeast:						
Delaware	42,000	2,200	5,550	450	36,450	1,750
Maryland	518,250	24,750	42,700	3,800	475,550	20,950
Virginia	140,650	7,800	44,950	3,550	95,700	4,250
West Virginia	301,000	14,800	20,350	1,300	280,650	13,500
North Carolina	156,800	9,600	34,200	4,000	122,600	5,600
South Carolina	278,350	13,950	12,400	1,600	265,950	12,350
Georgia	442,650	20,550	37,200	4,700	405,450	15,850
Florida	117,500	8,300	33,800	4,500	83,700	3,800
Total	1,997,200	101,950	231,150	23,900	1,766,050	78,050
South Central:						
Kentucky	201,950	11,750	29,450	4,050	172,500	7,700
Tennessee	262,850	14,950	31,700	4,000	231,150	10,950
Alabama	204,150	11,700	25,850	3,350	178,300	8,350
Mississippi	113,600	6,350	11,550	1,550	102,050	4,800
Arkansas	118,050	6,000	15,350	1,150	102,700	4,850
Louisiana	237,450	13,900	44,850	5,500	192,600	8,400
Oklahoma	171,050	8,500	15,300	1,000	155,750	7,500
Texas	827,050	40,700	102,300	9,200	724,750	31,500
Total	2,136,150	113,850	276,350	29,800	1,859,800	84,050
Total, South	4,133,350	215,800	507,500	53,700	3,625,850	162,100
West:						
Mountain:						
Montana	57,600	3,900	10,100	1,900	47,500	2,000
Idaho	56,500	2,800	7,700	850	48,800	1,950
Wyoming	30,650	1,650	6,600	750	24,050	900
Colorado	165,500	8,750	19,500	1,850	146,000	6,900
New Mexico	68,300	3,500	8,200	850	60,100	2,650
Arizona	114,200	5,300	9,700	900	104,500	4,400
Utah	79,900	4,850	12,400	1,350	67,500	3,500
Nevada	33,150	1,850	3,850	—	29,300	1,400
Total	605,800	32,600	78,050	8,900	527,750	23,700
Pacific:						
Washington	243,600	17,550	33,000	5,400	210,600	12,150
Oregon	167,900	13,400	24,750	4,000	143,150	9,400
California	1,478,650	80,400	147,500	17,500	1,331,150	62,900
Alaska	13,900	900	2,500	—	11,400	550
Hawaii	53,850	2,650	4,950	650	48,900	2,000
Total	1,957,900	114,900	212,700	27,900	1,745,200	87,000
Total, West	2,563,700	147,500	290,750	36,800	2,272,950	110,700
Total, United States	15,034,000	800,400	1,850,850	190,200	13,183,150	610,200

* Less than 500 employees.

Sources: See tables A-39 and A-30.

**Table A-39—Estimated employment and employment attributed to timber in transportation in the United States,
by industry and region, 1972, 1967, and 1963**

Region	(Number)							
	Total		Railroad		Truck		Water	
	Employment	Employment attributed to timber						
1972								
North:								
Northeast	435,800	35,650	96,400	8,450	274,900	20,500	64,500	6,650
North Central	579,250	39,750	210,300	25,600	347,900	12,000	21,050	2,150
Total	1,015,050	75,400	306,700	34,050	622,800	32,550	85,550	8,800
South:								
Southeast	275,800	27,900	75,950	11,550	169,300	13,200	30,550	3,150
South Central	312,650	31,950	84,700	14,150	174,100	12,300	53,850	5,500
Total	588,450	59,850	160,650	25,700	343,400	25,500	84,400	8,650
West:								
Mountain	75,350	7,700	32,650	5,400	42,450	2,250	—	—
Pacific	220,100	22,500	56,000	9,500	129,800	9,500	34,250	3,500
Total	295,450	165,450	88,650	14,900	172,250	11,750	34,550	3,550
Total, United States	1,898,950	165,450	556,000	74,650	1,138,450	69,800	204,500	21,000
1967								
North:								
Northeast	464,850	49,900	118,950	9,650	248,900	29,250	97,000	11,000
North Central	556,500	39,450	237,800	26,700	299,400	10,550	19,300	2,200
Total	1,021,350	89,350	356,750	36,350	548,300	39,800	116,300	13,200
South:								
Southeast	247,550	27,100	86,650	11,450	134,250	12,650	26,650	3,000
South Central	288,950	29,450	88,550	13,700	140,650	8,950	59,750	6,800
Total	536,500	56,550	175,200	25,150	274,900	21,600	86,400	9,800
West:								
Mountain	71,700	7,350	38,750	6,050	32,850	1,300	—	—
Pacific	219,400	24,100	64,250	10,050	111,350	9,100	43,800	4,950
Total	291,100	31,450	103,000	16,100	144,200	10,400	43,900	4,950
Total, United States	1,848,950	177,350	634,950	77,600	967,400	71,800	246,600	27,950
1963								
North:								
Northeast	482,400	52,500	156,850	16,100	227,800	19,650	97,750	16,750
North Central	570,200	47,200	292,350	32,700	259,650	11,350	18,200	3,150
Total	1,052,600	99,700	449,200	48,800	487,450	31,000	115,950	19,900
South:								
Southeast	231,150	23,900	96,750	9,350	110,600	10,450	23,800	4,100
South Central	276,350	29,800	107,100	13,600	119,500	7,700	49,750	8,500
Total	507,500	53,700	203,850	22,950	230,100	18,150	73,550	12,600
West:								
Mountain	78,050	8,900	45,900	7,250	32,050	1,600	—	—
Pacific	212,700	27,900	72,400	12,600	100,900	8,550	39,400	6,750
Total	290,750	36,800	118,300	19,850	132,950	10,150	39,500	6,800
Total, United States	1,850,850	190,200	771,350	91,600	850,500	59,300	229,000	39,300

See footnotes on page 61.

Table A-40—Estimated employment and employment attributed to timber in marketing in the United States, by industry and region, 1972, 1967, and 1963

Region	(Number)					
	Total		Retail Trade		Wholesale Trade	
Employment	Employment attributed to timber	Employment	Employment attributed to timber	Employment	Employment attributed to timber	
1972						
North:						
Northeast	4,157,150	163,750	2,945,000	104,850	1,212,150	58,900
North Central	4,672,050	169,700	3,510,150	134,750	1,161,900	34,950
Total	8,829,200	333,450	6,455,150	239,600	2,374,500	93,850
South:						
Southeast	2,496,300	110,550	1,907,900	83,950	588,400	26,600
South Central	2,495,500	100,400	1,850,500	77,350	645,000	23,050
Total	4,991,800	210,950	3,758,400	161,300	1,233,400	49,650
West:						
Mountain	743,900	32,950	580,900	26,450	163,000	6,500
Pacific	2,243,000	92,350	1,703,400	61,300	539,600	31,050
Total	2,986,900	125,300	2,284,300	87,750	702,600	37,550
Total, United States	16,807,900	669,700	12,497,850	488,650	4,310,050	181,050
1967						
North:						
Northeast	3,734,650	180,000	2,711,900	133,200	1,022,750	46,800
North Central	4,237,300	182,450	3,202,000	153,150	1,035,300	29,300
Total	7,971,950	362,450	5,913,900	286,350	2,058,050	76,100
South:						
Southeast	2,035,950	91,250	1,562,150	71,450	473,800	19,800
South Central	2,123,600	93,050	1,616,950	77,350	506,650	15,700
Total	4,159,550	184,300	3,179,100	148,800	980,450	35,500
West:						
Mountain	572,500	23,100	450,000	19,500	122,500	3,600
Pacific	1,942,350	87,900	1,462,100	59,300	480,250	28,600
Total	2,514,850	111,000	1,912,100	78,800	602,750	32,200
Total, United States	14,646,350	657,750	11,005,100	513,950	3,641,250	143,800
1963						
North:						
Northeast	3,465,600	167,250	2,558,850	117,900	906,750	49,350
North Central	3,818,750	170,150	2,904,100	140,100	914,650	30,050
Total	7,284,350	337,400	5,462,950	258,000	1,821,400	79,400
South:						
Southeast	1,766,050	78,050	1,354,100	60,650	411,950	17,400
South Central	1,859,800	84,050	1,405,950	68,200	453,850	15,850
Total	3,625,850	162,100	2,760,050	128,850	865,800	33,250
West:						
Mountain	527,750	23,700	414,150	19,550	113,600	4,150
Pacific	1,745,200	87,000	1,319,050	57,600	426,150	29,400
Total	2,272,950	110,700	1,733,200	77,150	539,750	33,550
Total, United States	13,183,150	610,200	9,956,200	464,000	3,226,950	146,200

Sources: *Retail trade*—Includes the total number of paid employees in the work week ending nearest November 15, and the number of active proprietors of unincorporated businesses. Estimates of the number of paid employees for 1972, 1967, and 1963, and active proprietors of unincorporated businesses for 1967 and 1963 were derived from data in the 1972, 1967 and 1963 *Censuses of Retail Trade*. Estimates of the number of proprietors of unincorporated businesses in 1972 were derived from the number of sole proprietorships and partnerships by State in the same source. Estimates of employment attributed to timber were calculated by adjusting total employment in retail trade by the estimated proportion of sales that were derived from timber products. These ratios were calculated, by State, from data on sales by merchandise line from the 1972, 1967, and 1963 *Censuses of Retail Trade*.

Wholesale trade—Includes the total number of paid employees in the work week nearest November 15, and the number of active proprietors of unincorporated businesses. Estimates of the number of paid employees for 1972, 1967, and 1963, and active proprietors of unincorporated businesses for 1967 and 1963 were derived from data in the 1972, 1967, and 1963 *Censuses of Wholesale Trade*. Estimates of the number of proprietors of unincorporated businesses by State for 1972 were based on trends in similar data for 1967 and 1963. Estimates of employment attributed to timber were derived by adjusting total employment in wholesale trade by the estimated proportion of total sales that were derived from timber products. These ratios were calculated, by State, from data on sales by commodity line from the 1972, 1967, and 1963 *Censuses of Wholesale Trade*. Separate estimates were made for merchant wholesalers, merchandise agents and brokers, and manufacturer's sales branches and sales offices, and incorporated in the final ratios for all wholesale trade.

Table A-41—Estimated value added in timber-based economic activities in the United States, by industry and region, 1972, 1967, and 1963

Region	Total	Timber management	Harvesting	Primary manufacturing	Secondary manufacturing	Construction	Transportation and marketing
1972							
North:							
Northeast	9,311,700	66,050	118,000	1,108,650	3,224,350	2,533,650	2,261,000
North Central	10,074,800	112,850	172,850	1,176,950	3,217,400	2,968,750	2,426,000
Total	19,386,500	178,900	290,850	2,285,600	6,441,750	5,502,400	4,687,000
South:							
Southeast	8,978,300	406,950	461,800	1,693,100	2,770,800	2,208,650	1,437,000
South Central	7,820,400	554,150	639,200	1,910,300	1,766,150	1,604,600	1,346,000
Total	16,798,700	961,100	1,101,000	3,603,400	4,536,950	3,813,250	2,783,000
West:							
Mountain	2,148,250	175,100	239,000	313,350	167,200	831,600	422,000
Pacific	10,131,000	1,548,600	1,434,500	2,594,600	1,358,300	1,800,000	1,395,000
Total	12,279,250	1,723,700	1,673,500	2,907,950	1,525,500	2,631,600	1,817,000
Total, United States	48,464,450	2,863,700	3,065,350	8,796,950	12,504,200	11,947,250	9,287,000
1967							
North:							
Northeast	7,491,950	52,900	113,550	942,650	2,650,300	1,973,550	1,759,000
North Central	6,858,300	89,200	142,850	937,650	2,252,300	1,715,300	1,721,000
Total	14,350,250	142,100	256,400	1,880,300	4,902,600	3,688,850	3,480,000
South:							
Southeast	5,313,850	249,850	331,200	1,148,850	1,768,500	966,450	849,000
South Central	4,531,400	276,800	341,750	1,082,100	1,141,150	834,600	855,000
Total	9,845,250	526,650	672,950	2,230,950	2,909,650	1,801,050	1,704,000
West:							
Mountain	971,200	79,800	146,250	181,000	73,100	256,050	235,000
Pacific	5,601,650	721,150	686,300	1,336,450	880,900	986,850	990,000
Total	6,572,850	800,950	832,550	1,517,450	954,000	1,242,900	1,225,000
Total, United States	30,768,350	1,469,700	1,761,900	5,628,700	8,766,250	6,732,800	6,409,000
1963							
North:							
Northeast	6,337,300	52,500	102,500	793,400	2,150,450	1,644,450	1,594,000
North Central	5,827,400	77,750	138,550	780,100	1,684,400	1,665,600	1,481,000
Total	12,164,700	130,250	241,050	1,573,500	3,834,850	3,310,050	3,075,000
South:							
Southeast	4,079,500	218,200	261,300	1,001,500	1,290,900	678,600	629,000
South Central	3,483,000	198,950	254,850	888,950	773,450	660,800	706,000
Total	7,562,500	417,150	516,150	1,890,450	2,064,350	1,339,400	1,335,000
West:							
Mountain	949,900	48,250	100,800	150,500	55,350	370,000	225,000
Pacific	5,401,950	740,750	674,950	1,180,000	684,100	1,217,150	905,000
Total	6,351,850	789,000	775,750	1,330,500	739,450	1,587,150	1,130,000
Total, United States	26,079,050	1,336,400	1,532,950	4,794,450	6,638,650	6,236,600	5,540,000

Sources: See source notes to individual subject tables.

Table A-42—Estimated value added in timber-based economic activities in the United States, by region and State, 1972, 1967, and 1963

(Thousand dollars)						
Region and State	1972	1967	1963	Region and State	1972	1967
North:				South Central:		
Northeast:				Kentucky	505,450	292,950
Maine	510,150	385,300	307,750	Tennessee	983,600	713,650
New Hampshire	232,850	161,050	115,550	Alabama	1,220,700	720,100
Vermont	131,400	94,100	72,350	Mississippi	830,950	446,650
Massachusetts	1,134,050	849,600	763,200	Arkansas	846,950	470,900
Rhode Island	146,200	106,800	89,500	Louisiana	1,080,350	623,200
Connecticut	512,100	374,800	314,000	Oklahoma	337,450	167,950
New York	3,157,200	2,946,850	2,459,850	Texas	2,014,950	1,096,000
New Jersey	1,352,250	999,500	865,100	Total	7,820,400	4,531,400
Pennsylvania	2,135,200	1,573,950	1,350,000	Total, South	16,798,700	9,845,250
Total	9,311,700	7,491,950	6,337,300	Total, South	16,798,700	9,845,250
North Central:				West:		
Ohio	1,756,550	1,263,750	1,033,150	Mountain:		
Indiana	960,000	650,450	508,900	Montana	325,950	180,050
Illinois	2,006,000	1,270,900	1,148,950	Idaho	425,450	211,000
Michigan	1,439,200	1,042,800	837,850	Wyoming	65,900	31,400
Wisconsin	1,296,200	960,100	768,650	Colorado	443,250	197,800
Minnesota	837,550	518,650	478,950	New Mexico	115,500	71,750
Iowa	358,050	245,950	211,450	Arizona	455,450	159,050
Missouri	806,300	546,300	462,150	Utah	162,050	75,500
North Dakota	52,150	30,800	43,250	Nevada	114,700	44,650
South Dakota	58,450	34,550	43,600	Total	2,148,250	971,200
Nebraska	213,850	122,900	120,050	Total	2,148,250	971,200
Kansas	290,400	171,150	170,450	Pacific:		
Total	10,074,800	6,858,300	5,827,400	Washington	2,307,650	1,285,200
Total, North	19,386,500	14,350,250	12,164,700	Oregon	2,993,200	1,540,150
South:				California	4,548,300	2,264,650
Southeast:				Alaska	126,050	73,300
Delaware	95,050	63,650	61,200	Hawaii	155,800	78,350
Maryland	754,000	499,850	383,850	Total	10,131,000	5,601,650
Virginia	1,406,250	877,200	683,750	Total	10,131,000	5,601,650
West Virginia	274,650	192,250	158,050	Total, West	12,279,250	6,572,850
North Carolina	1,845,050	1,219,850	886,250	Total, United States	48,464,450	30,768,350
South Carolina	1,032,800	602,250	470,150	Total, United States	48,464,450	30,768,350
Georgia	1,839,250	1,010,400	830,900			
Florida	1,731,250	848,400	605,350			
Total	8,978,300	5,313,850	4,079,500			

Sources: See source notes to individual subject tables.

Table A-43—Estimated employment in timber-based economic activities in the United States, by industry and region, 1972, 1967, and 1963

(Number)

Region	Total	Timber management	Harvesting	Primary manufacturing	Secondary manufacturing	Construction	Transportation and marketing
1972							
North:							
Northeast	675,250	12,400	19,350	59,850	232,600	151,650	199,400
North Central	700,100	15,300	25,900	61,800	200,650	187,000	209,450
Total	1,375,350	27,700	45,250	121,650	433,250	338,650	408,850
South:							
Southeast	688,500	25,300	40,300	85,150	224,600	174,700	138,450
South Central	585,150	23,400	57,200	96,400	142,950	132,850	132,350
Total	1,273,650	48,700	97,500	181,550	367,550	307,550	270,800
West:							
Mountain	143,450	11,650	8,350	16,950	13,650	52,200	40,650
Pacific	472,500	29,150	39,300	106,400	85,950	96,850	114,850
Total	615,950	40,800	47,650	123,350	99,600	149,050	155,500
Total, United States	3,264,950	117,200	190,400	426,550	900,400	795,250	835,150
1967							
North:							
Northeast	737,700	11,300	28,700	68,700	256,250	142,350	230,400
North Central	677,200	14,250	34,200	66,550	193,900	145,650	222,650
Total	1,414,900	25,550	62,900	135,250	450,150	288,000	453,050
South:							
Southeast	558,800	22,700	54,300	87,100	196,850	80,250	117,600
South Central	516,600	21,500	63,800	94,050	122,100	93,400	121,750
Total	1,075,400	44,200	118,100	181,150	318,950	173,650	239,350
West:							
Mountain	99,950	10,850	10,200	17,600	7,800	22,950	30,550
Pacific	433,450	27,050	45,150	103,750	74,050	71,300	112,150
Total	533,400	37,900	55,350	121,350	81,850	94,250	142,700
Total, United States	3,023,700	107,650	236,350	437,750	850,950	555,900	835,100
1963							
North:							
Northeast	747,850	10,250	32,700	70,550	256,600	158,000	219,750
North Central	684,000	13,000	40,800	64,850	178,100	169,900	217,350
Total	1,431,850	23,250	73,500	135,400	434,700	327,900	437,100
South:							
Southeast	551,600	20,650	69,50	96,100	173,550	90,000	101,950
South Central	494,500	20,300	67,650	97,700	104,350	90,650	113,850
Total	1,046,100	40,950	137,000	193,800	277,900	180,650	215,800
West:							
Mountain	110,450	8,250	9,400	16,650	6,850	36,700	32,600
Pacific	469,950	22,250	56,650	103,900	70,350	101,900	114,900
Total	580,400	30,500	66,050	120,550	77,200	138,600	147,500
Total, United States	3,058,350	94,700	276,550	449,750	789,800	647,150	800,400

Sources: See source notes to individual subject tables.

Table A-44—Estimated employment in timber-based economic activities in the United States, by region and State, 1972, 1967, and 1963

(Number)						
Region and State	1972	1967	1963	Region and State	1972	1967
North:				South Central:		
Northeast:				Kentucky	41,350	38,200
Maine	40,200	42,200	38,850	Tennessee	81,750	81,050
New Hampshire	19,500	17,100	16,800	Alabama	84,700	75,900
Vermont	12,050	11,350	11,100	Mississippi	61,950	55,400
Massachusetts	90,100	89,600	93,950	Arkansas	58,700	53,600
Rhode Island	11,800	12,550	12,150	Louisiana	66,600	62,350
Connecticut	37,100	37,150	38,750	Oklahoma	28,800	23,050
New York	213,050	255,100	271,150	Texas	161,300	127,050
New Jersey	89,750	95,900	95,500	Total	585,150	516,600
Pennsylvania	161,700	176,750	169,600			494,500
Total	675,250	737,700	747,850	Total, South	1,273,650	1,075,400
North Central:						1,046,100
Ohio	118,150	116,250	113,450	West:		
Indiana	69,950	67,950	64,250	Mountain:		
Illinois	130,750	125,000	127,550	Montana	17,200	16,200
Michigan	97,650	100,800	95,350	Idaho	21,800	19,300
Wisconsin	86,350	86,900	86,050	Wyoming	4,250	3,400
Minnesota	57,450	49,050	56,850	Colorado	35,900	21,650
Iowa	28,050	27,350	27,750	New Mexico	13,000	9,450
Missouri	61,500	60,500	61,850	Arizona	29,400	15,950
North Dakota	4,650	4,200	6,100	Utah	14,250	9,900
South Dakota	5,800	5,300	6,700	Nevada	7,650	4,100
Nebraska	16,850	14,150	16,350	Total	143,450	99,950
Kansas	22,950	19,750	21,750			110,450
Total	700,100	677,200	684,000	Pacific:		
Total, North	1,375,350	1,414,900	1,431,850	Washington	92,500	90,400
South:				Oregon	103,750	104,150
Southeast:				California	259,550	227,300
Delaware	6,800	6,700	6,500	Alaska	6,650	4,100
Maryland	53,100	61,500	55,400	Hawaii	10,050	7,500
Virginia	110,800	81,150	82,550	Total	472,500	433,450
West Virginia	21,900	35,550	33,450			469,950
North Carolina	159,750	135,100	123,150	Total, West	615,950	533,400
South Carolina	77,850	74,850	69,950	Total, United States	3,264,950	3,023,700
Georgia	126,250	113,300	113,700			3,058,350
Florida	132,250	50,650	66,900			
Total	688,500	558,800	551,600			

Sources: See source notes to individual subject tables.

Appendix B.

Industry Definitions

Most of the data on primary and secondary manufacturing used in this study came from the 1963, 1967, and 1972 *Censuses of Manufactures*. Firms are classified for the manufacturing census basically according to the products they produce. Thus, an establishment is classified in a particular industry (SIC) if its production of the primary products of that industry exceeds in value its production of products of any other single industry. While some establishments produce only the primary products of the industry in which they are classified, rarely do all the establishments in an industry specialize to that extent. For example, only 94 percent of the total value of shipments from those firms classified in the Wood Household Furniture Industry (SIC 2511) in 1972, was wood household furniture. The remaining 6 percent consisted of such diverse products as metal office and household furniture, hardwood dimension and flooring, games, toys, sporting and athletic goods, and household cooking equipment. Looked at from the product viewpoint, about 95 percent of the total value of shipments of wood household furniture in 1972 came from firms classified in the Wood Household Furniture Industry. In addition, wood household furniture was produced in the Upholstered and Metal Furniture Industries (SIC's 2512 and 2514), the Mattresses and Bedsprings Industry (SIC 2515), and in several others.

The types of firms (by SIC industry codes) included in the major primary and secondary manufacturing industries recognized in this study are shown in table B-1 on page 83 and defined below. Changes necessitated by SIC industry reclassification during the study period are shown in the footnotes to table B-1 and discussed below.

Primary Manufacturing

Sawmills and planing mills:

2421 *Sawmills and Planing Mills, General*—Establishments primarily engaged in sawing rough lumber and timber from logs and bolts or resawing cants and flitches into lumber, including box lumber and softwood cut stock; planing mills combined with sawmills; and separately operated planing mills which are engaged primarily in producing surfaced lumber and standard workings or patterns of lumber. Includes establishments primarily engaged in sawing lath and railroad ties, and in producing tobacco hoghead stock, wood chips, and snow fence lath.

2426 *Hardwood Dimension and Flooring*—Establishments primarily engaged in manufacturing hardwood dimension lumber and workings therefrom; and other hardwood dimension, semifabricated or ready for assembly; hardwood flooring; and wood

frames for household furniture. Establishments primarily engaged in manufacturing wood frames for household furniture, added to this SIC in 1972, were classified in industry 2512, Upholstered Household Furniture, in 1967 and 1963.

Veneer and plywood plants:

2432 *Veneer and Plywood*—Establishments primarily engaged in producing commercial veneer, either face or technical, and those primarily engaged in manufacturing commercial plywood, including nonwood backed or faced veneer and nonwood faced plywood, from veneer produced in the same establishment or from purchased veneer (1967 and 1963 only).

2435 *Hardwood Veneer and Plywood*—Establishments primarily engaged in producing commercial hardwood veneer, either face or technical, and those primarily engaged in manufacturing commercial plywood or prefinished hardwood plywood. This includes nonwood backed or faced veneer and nonwood faced plywood from veneer produced in the same establishment or from purchased veneer. This SIC was created in 1972 when former SIC 2432, Veneer and Plywood, was split into separate hardwood and softwood industries.

2436 *Softwood Veneer and Plywood*—Establishments primarily engaged in producing commercial softwood veneer and plywood, from veneer produced in the same establishment or from purchased veneer. This SIC was created in 1972 when former SIC 2432, Veneer and Plywood, was split into separate hardwood and softwood industries.

Pulp, paper, and paperboard mills:

2611 *Pulp mills*—Establishments primarily engaged in manufacturing pulp from wood or from other materials such as rags, linters, waste paper, bagasse, and straw.

2621 *Papermills, Except Building Paper*—Establishments primarily engaged in manufacturing paper, except building paper (Industry 2661) from wood-pulp and other fibers, and which may also manufacture converted paper products. Pulp mills combined with papermills and not separately reported are also included.

2631 *Paperboard Mills*—Establishments primarily engaged in manufacturing paperboard, including paperboard coated on the paperboard machine, from woodpulp, waste paper, and other fibers; and which may also manufacture converted paperboard products. Pulp mills combined with paper-

board mills and not separately reported are also included.

2661 *Building Paper and Board Mills*—Establishments primarily engaged in manufacturing building paper and building board from wood pulp and other fibrous materials. Pulp mills combined with building paper and building board mills, and not separately reported, are also included.

Other primary:

2429 *Special Product Sawmills, N.E.C.*—Establishments primarily engaged in manufacturing excelsior, wood shingles, and cooperage stock; and in sawing special products, not elsewhere classified.

2492 *Particleboard*—Establishments primarily engaged in manufacturing wood panel products from small wood particles. Manufacture may take place in hydraulic presses with heated platens or by extrusion. This SIC was created in 1972. Establishments classified in this SIC were formerly part of 2499, Wood Products, N.E.C.

2861 *Gum and Wood Chemicals*—Establishments primarily engaged in manufacturing hardwood and softwood distillation products, wood and gum naval stores, charcoal, natural dyestuffs, and natural tanning materials.

2439 *Structural Wood Members, N.E.C.*—Establishments primarily engaged in producing laminated or fabricated trusses, arches, and other structural members of lumber. This SIC was created in 1972. Establishments now classified in this SIC were in SIC 2433, Prefabricated Wood Structures, in 1967 and 1963.

2451 *Mobile Homes*—Establishments primarily engaged in manufacturing mobile homes. These mobile homes are generally over 35 feet long, at least 8 feet wide, do not have facilities for storage of water or waste, and are equipped with wheels. This SIC was created in 1972. Establishments now classified in this SIC were formerly in SIC 3791, Trailer Coaches.

2452 *Prefabricated Wood Buildings*—Establishments primarily engaged in manufacturing prefabricated wood buildings, sections, and panels. This SIC was created in 1972. Establishments now classified in this SIC were formerly in SIC 2433, Prefabricated Wood Structures.

3791 *Trailer Coaches*—Establishments primarily engaged in manufacturing trailer coaches (mobile dwellings) for attachment to passenger cars, and pickup coaches (campers) for mounting on pickup trucks.

Secondary Manufacturing

Millwork and prefabricated wood products:

2431 *Millwork*—Establishments primarily engaged in manufacturing fabricated millwork. Planing mills primarily engaged in producing millwork are included, but planing mills primarily producing standard workings or patterns of lumber are classified in SIC 2421, Sawmills and Planing Mills, General. In 1967 and 1963, this SIC also included the manufacture of custom cabinetwork to be built-in, which was transferred to new SIC 2434, Wood Kitchen Cabinets, in 1972.

2433 *Prefabricated Wood Structures*—Establishments primarily engaged in manufacturing prefabricated wood buildings, sections, and panels; or in producing laminated or fabricated trusses, arches, and other structural members of lumber (1967 and 1963 only).

2434 *Wood Kitchen Cabinets*—Establishments primarily engaged in manufacturing wood kitchen cabinets, stock line or custom, and vanities and other cabinetwork. This SIC was created in 1972 by combining the manufacture of custom cabinetwork to be built-in from former SIC 2431 with wood kitchen cabinets from former SIC 2511.

Wooden containers:

2441 *Nailed Wood Boxes and Shook*—Establishments primarily engaged in manufacturing nailed and lock-corner wooden boxes (lumber or plywood), which also may produce shook for nailed and lock-corner boxes.

2442 *Wirebound Boxes and Crates*—Establishments primarily engaged in manufacturing wirebound boxes and crates (1967 and 1963 only).

2443 *Veneer and Plywood Containers*—Establishments primarily engaged in manufacturing veneer and plywood containers, except boxes, including baskets made primarily of veneer and splint for shipping and marketing fruits and vegetables (1967 and 1963 only).

2445 *Cooperage*—Establishments primarily engaged in the manufacture of barrels, tubs, hogshead, and other containers made of staves, except fruit and vegetable baskets (1967 and 1963 only).

2448 *Wood Pallets and Skids*—Establishments primarily engaged in manufacturing wood and wood-metal combination pallets and skids. This SIC was created in 1972. Establishments classified in this SIC were formerly in SIC 2499, Wood Products, N.E.C.

2449 *Wood Containers, N.E.C.*—Establishments primarily engaged in manufacturing wood containers, not elsewhere classified, such as cooperage, wirebound boxes and crates, and other veneer and plywood containers. This SIC was created in 1972 by combining former SIC's 2442, Wirebound Boxes and Crates; 2443, Veneer and Plywood Containers; and 2445, Cooperage.

Furniture:

2511 *Wood Household Furniture*—Establishments primarily engaged in manufacturing wood household furniture commonly used in dwellings. Also included are establishments engaged in manufacturing infants' and children's wood furniture and wood outdoor furniture. In 1967 and 1963, this SIC also included establishments primarily engaged in the manufacture of wood kitchen cabinets (transferred to SIC 2434 in 1972) and those primarily engaged in manufacturing wood, TV, radio, phonograph, and sewing machine cabinets (transferred to SIC 2517 in 1972.)

2512 *Upholstered Household Furniture*—Establishments primarily engaged in manufacturing upholstered furniture on wood frames. In 1963 and 1967, this SIC also included those firms primarily engaged in manufacturing only wood frames for upholstered furniture. In 1972 these establishments were included in SIC 2426.

2514 *Metal Household Furniture*—Establishments primarily engaged in manufacturing metal household furniture, whether padded or plain, of a type commonly used in dwellings.

2515 *Mattresses and Bedsprings*—Establishments primarily engaged in manufacturing innerspring mattresses, box spring mattresses, and noninnerspring mattresses containing felt, foam rubber, or any other filling material; and assembled wire springs (fabric, coil, or box) for use on beds, couches, and cots. This SIC also includes establishments primarily engaged in manufacturing dual-purpose sleep furniture, such as studio couches, sofa beds, and chairbeds regardless of the material used in the frame.

2517 *Wood TV and Radio Cabinets*—Establishments primarily engaged in manufacturing wood radio, phonograph, hi-fi, and television cabinets. This SIC also includes establishments primarily engaged in manufacturing sewing machine cabinets. This SIC was created in 1972. Establishments now classified in this SIC were formerly in 2511, Wood Household Furniture.

2519 *Household Furniture, N.E.C.*—Establishments primarily engaged in manufacturing reed, rattan, and other wicker furniture, plastics and fiberglass household furniture and cabinets, and household furniture, N.E.C.

2521 *Wood Office Furniture*—Establishments primarily engaged in manufacturing wood office furniture whether padded, upholstered, or plain.

2531 *Public Building and Related Furniture*—Establishments primarily engaged in manufacturing furniture for schools, theaters, assembly halls, churches, and libraries, and also including the manufacture of seats for public conveyance and seats for automobiles and aircraft.

2541 *Wood Partitions and Fixtures*—Establishments primarily engaged in manufacturing wood shelving, lockers, office and store fixtures, prefabricated plastic laminated fixture tops, and related fabricated products.

2542 *Metal Partitions and Fixtures*—Establishments primarily engaged in manufacturing metal shelving, storage racks, lockers, office and store fixtures, prefabricated partitions, and related fabricated products.

2599 *Furniture and Fixtures, N.E.C.*—Establishments primarily engaged in manufacturing furniture and fixtures, not elsewhere classified, including furniture especially designed for use in restaurants, bars, cafeterias, bowling establishments, and ships.

Paper and paperboard products:

2641 *Paper Coating and Glazing*—Establishments primarily engaged in manufacturing coated, glazed, or varnished paper from purchased paper. Also included are establishments primarily manufacturing pressure sensitive tape with backing of any material other than rubber.

2642 *Envelopes*—Establishments primarily engaged in manufacturing envelopes of any description from purchased paper and paperboard.

2643 *Bags, Except Textile Bags*—Establishments primarily engaged in manufacturing bags from purchased paper, cellophane, acetate, polyethylene, polypropylene, pliofilm, foil, and similar sheet or film materials.

2644 *Wallpaper*—Establishments primarily engaged in designing, printing, and embossing paper for interior walls and ceilings (1967 and 1963 only).

2645 *Die-cut Paper and Board*—Establishments primarily engaged in diecutting purchased paper and paperboard; and in manufacturing cardboard by laminating, lining, or surface coating paperboard.

2646 *Pressed and Molded Pulp Goods*—Establishments primarily engaged in manufacturing all kinds of pressed and molded goods, including papier-mache articles other than statuary and art goods.

2647 *Sanitary Paper Products*—Establishments primarily engaged in manufacturing, from purchased paper, sanitary paper products, such as facial tissue and hankerchiefs, table napkins, toilet paper, towels, disposable diapers, and sanitary napkins and tampons. In 1967 and 1963, firms manufacturing disposable paper diapers were in 2399, Fabricated Textile Products, N.E.C.

2648 *Stationery Products*—Establishments primarily engaged in manufacturing stationery, tablets, looseleaf fillers, and related items from purchased paper. This SIC was created in 1972. Establishments now classified in this SIC were formerly in 2649, Converted Paper Products, N.E.C.

2649 *Converted Paper Products N.E.C.*—Establishments primarily engaged in manufacturing from purchased paper or paperboard, miscellaneous converted paper or paperboard products, not elsewhere classified. Includes firms manufacturing wallpaper in 1972, formally in 2644 in 1967 and 1963.

2651 *Folding Paperboard Boxes*—Establishments primarily engaged in manufacturing folding paperboard boxes from purchased paperboard.

2652 *Set-up Paperboard Boxes*—Establishments primarily engaged in manufacturing setup paperboard boxes from purchased paperboard.

2653 *Corrugated and Solid Fiber Boxes*—Establishments primarily engaged in manufacturing corrugated and solid fiber boxes and related products from purchased paperboard of fiber stock. Important products of this industry include corrugated and solid fiberboard boxes, pads, partitions, display items, pallets, single face products, and corrugated sheets.

2654 *Sanitary Food Containers*—Establishments primarily engaged in manufacturing food containers from special food board. Important products of this industry include fluid milk containers; folding paraffined cartons for butter, margarine, and shortening; ice cream containers; frozen food containers; liquid tight containers; dishes, spoons, and similar products.

2655 *Fiber Cans, Drums, and Similar Products*—Establishments primarily engaged in manufacturing from purchased materials fiber cans, cones, drums, and similar products, with or without metal ends, and vulcanized fiber boxes.

Fibers, plastics and textiles:

2211 *Weaving Mills, Cotton*—Establishments primarily engaged in weaving fabrics over 12 inches in width, wholly or chiefly of cotton.

2221 *Weaving Mills, Man-Made Fiber, Silk*—Establishments primarily engaged in weaving fabrics over 12 inches in width, wholly or chiefly of silk and manmade fibers, including glass.

2241 *Narrow Fabric Mills*—Establishments primarily engaged in weaving or braiding fabrics 12 inches in width or narrower of cotton, wool, silk, and manmade fibers, including glass.

2253 *Knit Outerwear Mills*—Establishments primarily engaged in knitting outerwear from yarn or in manufacturing outerwear from knit fabric produced in the same establishment.

2254 *Knit Underwear Mills*—Establishments primarily engaged in knitting underwear and nightwear from yarn or in manufacturing underwear and nightwear from knit fabric produced in the same establishment.

2256 *Knit Fabric Mills*—Establishments primarily engaged in knitting tubular or flat fabric and in dyeing or finishing knit fabric (1967 and 1963 only).

2258 *Warp Knit Fabric Mills*—Establishments primarily engaged in knitting warp (flat fabric) or in dyeing or finishing warp (flat) knit fabric (1972 only).

2259 *Knitting Mills, N.E.C.*—Establishments primarily engaged in knitting gloves and other articles, not elsewhere classified.

2262 *Finishing Plants, Manmade Fiber and Silk*—Establishments primarily engaged in finishing purchased manmade fiber and silk broad woven fabrics or finishing such fabrics on a commission basis. These finishing operations include bleaching, dyeing, printing (roller, screen, flock, and plisse), and other mechanical finishing such as preshrinking, calendering, and napping.

2272 *Tufted Carpets and Rugs*—Establishments primarily engaged in tufting carpets and rugs from any textile fiber. Important products of this industry include tufted carpets, rugs, scatter rugs, and bathmats and bathmat sets except terry woven.

2281 *Yarn Mills, Except Wool*—Establishments primarily engaged in spinning yarn wholly or chiefly by weight of cotton, manmade fibers, or silk staple.

2282 *Throwing and Winding Mills*—Establishments primarily engaged in texturizing, throwing, twisting, winding, or spooling yarn wholly or chiefly by weight of cotton, manmade fibers, or silk.

2284 *Thread Mills*—Establishments primarily engaged in manufacturing thread from natural or man-made fiber except flax and wool.

2294 *Processed Textile Waste*—Establishments primarily engaged in processing textile mill waste for spinning, padding, batting, or other uses; in recovering textile fibers from clippings and rags; in cutting flock from waste, recovered fibers, or new fiber stock, and in manufacturing oakum and twisted jute packing.

2296 *Tire Cord and Fabric*—Establishments primarily engaged in manufacturing cord and fabric for use in reinforcing rubber tires, industrial belting, fuel cells, and similar uses.

2297 *Nonwoven Fabric Mills*—Establishments primarily engaged in manufacturing nonwoven fabrics (by bonding and/or interlocking of fibers) by mechanical, chemical, thermal, or solvent means or by combinations thereof; or in manufacturing nonwoven fabricated products such as blankets, ribbons, and wipers (1972 only).

2298 *Cordage and Twine*—Establishments primarily engaged in manufacturing rope, cable, cordage, twine, and related products from abaca (Manila), sisal, henequen, hemp, cotton, paper, jute, flax, manmade fibers including glass, and other fibers.

2311 *Men's and Boys' Suits and Coats*—Establishments primarily engaged in the manufacture of men's, youths', and boys' suits, coats, and overcoats. Establishments primarily engaged in manufacturing uniforms (except athletic) are also included in this industry.

2321 *Men's and Boys' Shirts and Nightwear*—Establishments primarily engaged in the manufacture of mens' and boys' shirts (including polo and sports shirts) and nightwear cut and sewed from purchased woven or knit fabrics.

2323 *Men's and Boys' Neckwear*—Establishments primarily engaged in the manufacture of men's and boys' neckties, scarfs, and mufflers cut and sewed from purchased woven or knit fabric.

2327 *Men's and Boys' Separate Trousers*—Establishments primarily engaged in the manufacture of men's and boys' separate trousers and slacks.

2329 *Men's and Boys' Clothing, N.E.C.*—Establishments primarily engaged in manufacturing men's, youths' and boys' clothing, not elsewhere classified.

2331 *Women's and Misses' Blouses and Waists*—Establishments primarily engaged in manufacturing women's, misses' and juniors' blouses, waists, and shirts.

2335 *Women's and Misses' Dresses*—Establishments primarily engaged in manufacturing women's, misses' and juniors' dresses, including ensemble dresses and pants dresses, whether sold by the piece or by the dozen.

2337 *Women's and Misses' Suits and Coats*—Establishments primarily engaged in manufacturing women's, misses', and juniors' suits, pantsuits, skirts, and coats except fur coats and raincoats. These garments are generally tailored and usually lined.

2341 *Women's and Children's Underwear*—Establishments primarily engaged in manufacturing women's, misses', children's, and infant's underwear and nightwear cut and sewed from purchased woven or knit fabric.

2361 *Children's Dresses and Blouses*—Establishments primarily engaged in manufacturing girls', children's, and infants' dresses, blouses, waists, and shirts, cut and sewed from purchased woven or knit fabric.

2363 *Children's Coats and Suits*—Establishments primarily engaged in manufacturing girls', children's, and infants' coats and suits, cut and sewed from purchased woven or knit fabric.

2369 *Children's Outerwear, N.E.C.*—Establishments primarily engaged in manufacturing girls', children's, and infants' outerwear not elsewhere classified, cut and sewed from woven or knit fabric.

2384 *Robes and Dressing Gowns*—Establishments primarily engaged in manufacturing men's and women's robes and dressing gowns.

2391 *Curtains and Draperies*—Establishments primarily engaged in manufacturing curtains and draperies from purchased materials.

2392 *House Furnishings, N.E.C.*—Establishments primarily engaged in manufacturing house furnishings such as blankets, bedspreads, sheets, tablecloths, and towels from purchased materials.

2394 *Canvas and Related Products*—Establishments primarily engaged in manufacturing awnings, tents, and related products from purchased fabric.

2399 *Fabricated Textile Products, N.E.C.*—Establishments primarily engaged in manufacturing fabricated textile products, not elsewhere classified.

2821 *Plastic Materials and Resins*—Establishments primarily engaged in manufacturing synthetic resins, plastics materials, and nonvulcanizable elastomers. Important products of this industry include cellulose plastic materials.

2823 *Cellulosic Manmade Fibers*—Establishments primarily engaged in manufacturing cellulose fibers (including cellulose acetate and regenerated

cellulose such as rayon, by the viscose or cuprammonium process) in the form of monofilament, yarn, staple, or tow suitable for further manufacturing on spindles, looms, knitting machines, or other textile processing equipment.

Other secondary:

2491 *Wood Preserving*—Establishments primarily engaged in treating wood, sawed or planed in other establishments, with creosote or other preservatives to prevent decay and to protect against fire and insects. Also included is the cutting, treating, and selling of poles, posts, and pilings, but establishments primarily engaged in manufacturing other wood products (which they may also treat with preservatives) are not included.

2499 *Wood Products N.E.C.*—Establishments primarily engaged in turning and shaping wood and

manufacturing miscellaneous wood products, rat-tan, reed, splint, straw, veneer, veneer strips, wicker, and willow. Also included are establishments manufacturing lasts and related products, cork products, hardboard, and wood or metal mirror and picture frames. In 1967 and 1963, this SIC also included establishments primarily engaged in manufacturing pallets and skids.

Others—In addition to the SIC's shown, the data on employment and value added attributable to timber included the value added and employment attributed to timber in plants manufacturing ships and boats, small arms, morticians' goods, sporting and athletic goods, games and toys, and many other items in which small quantities of timber and timber products were incorporated. Compilations of total value added and total employment were not made for this large and diverse group of industries since they include nearly all manufacturing industries not defined above.

Table B-1—Types of firms included in the major primary and secondary industries, 1972, 1967, and 1963.

Industry	1972	1967	1963	Industry	1972	1967	1963
Primary manufacturing				Paper and paperboard products (cont'd)			
Sawmills and planing mills				Bags, except textile bags (<i>SIC</i> 2643)	X	X	X
Sawmills and planing mills, general (<i>SIC</i> 2421)	X	X	X	Wallpaper (<i>SIC</i> 2644)	¹⁰	X	X
Hardwood dimension and flooring (<i>SIC</i> 2426)	X ¹	X	X	Die-cut paper and board (<i>SIC</i> 2645)	X	X	X
Veneer and plywood plants				Pressed and molded pulp goods (<i>SIC</i> 2646)	X	X	X
Veneer and plywood plants (<i>SIC</i> 2432)	²	X	X	Sanitary paper products (<i>SIC</i> 2647)	X ¹¹	X	X
Hardwood veneer and plywood plants (<i>SIC</i> 2435)	X ³			Stationery products (<i>SIC</i> 2648)	X ¹²		
Softwood veneer and plywood plants (<i>SIC</i> 2436)	X ³			Converted paper products, nec (<i>SIC</i> 2649)	X ^{10,12}	X	X
Pulp, paper, and paperboard mills				Folding paperboard boxes (<i>SIC</i> 2651)	X	X	X
Pulp mills (<i>SIC</i> 2611)	X	X	X	Set-up paperboard boxes (<i>SIC</i> 2652)	X	X	X
Papermills except building paper (<i>SIC</i> 2621)	X	X	X	Corrugated and solid fiber boxes (<i>SIC</i> 2653)	X	X	X
Paperboard mills (<i>SIC</i> 2631)	X	X	X	Sanitary food containers (<i>SIC</i> 2654)	X	X	X
Building paper and board mills (<i>SIC</i> 2661)	X	X	X	Fiber cans, drums and similar products (<i>SIC</i> 2655)	X	X	X
Other primary				Fibers, plastics and textile products			
Special product sawmills, n.e.c. (<i>SIC</i> 2429)	X	X	X	Weaving mills, cotton (<i>SIC</i> 2211)	X	X	X
Particleboard (<i>SIC</i> 2492)	X	X	X	Weaving mills, synthetics (<i>SIC</i> 2221)	X	X	X
Gum and wood chemicals (<i>SIC</i> 2861)	X ¹			Narrow fabric mills (<i>SIC</i> 2241)	X	X	X
Secondary manufacturing				Knit outerwear mills (<i>SIC</i> 2253)	X	X	X
Millwork, and prefabricated wood products				Knit underwear mills (<i>SIC</i> 2254)	X	X	X
Millwork (<i>SIC</i> 2431)	X ⁴			Knit fabric mills (<i>SIC</i> 2256)	X	X	X
Prefabricated wood structures (<i>SIC</i> 2433)		X	X	Warp knit fabric mills (<i>SIC</i> 2258)	X ¹³		
Wood kitchen cabinets (<i>SIC</i> 2434)	X ⁴			Knitting mills, n.e.c. (<i>SIC</i> 2259)	X	X	X
Structural wood members, n.e.c. (<i>SIC</i> 2439)	X ⁴			Finishing plants, synthetics (<i>SIC</i> 2262)	X	X	X
Mobile homes (<i>SIC</i> 2451)	X ⁴			Tufted carpets and rugs (<i>SIC</i> 2272)	X	X	X
Prefabricated wood buildings (<i>SIC</i> 2452)	X ³			Yarn mills, except wool (<i>SIC</i> 2281)	X	X	X
Trailer coaches (<i>SIC</i> 3791)	⁶	X	X	Throwing and winding mills (<i>SIC</i> 2282)	X	X	X
Wooden containers				Thread mills (<i>SIC</i> 2284)	X	X	X
Nailed wood boxes and shook (<i>SIC</i> 2441)	X	X	X	Processed textile waste (<i>SIC</i> 2294)	X	X	X
Wirebound boxes and crates (<i>SIC</i> 2442)	⁷	X	X	Tire cord and fabric (<i>SIC</i> 2296)	X	X	X
Veneer and plywood containers (<i>SIC</i> 2443)	⁷	X	X	Nonwoven fabric mills (<i>SIC</i> 2297)	X	X	X
Cooperage (<i>SIC</i> 2445)	⁷	X	X	Cordage and twine (<i>SIC</i> 2298)	X ¹⁴		
Wood pallets and skids (<i>SIC</i> 2448)	X ⁴			Men's and boy's suits and coats (<i>SIC</i> 2311)	X	X	X
Wood containers, n.e.c. (<i>SIC</i> 2449)	X ⁴			Men's and boy's shirts and nightwear (<i>SIC</i> 2321)	X	X	X
Furniture				Men's and boy's neckwear (<i>SIC</i> 2323)	X	X	X
Wood household furniture (<i>SIC</i> 2511)	X ^{4*}	X	X	Men's and boy's separate trousers (<i>SIC</i> 2327)	X	X	X
Upholstered household furniture (<i>SIC</i> 2512)	X ¹	X	X	Men's and boy's clothing, n.e.c. (<i>SIC</i> 2329)	X	X	X
Metal household furniture (<i>SIC</i> 2514)	X	X	X	Women's, misses' blouses and waists (<i>SIC</i> 2331)	X	X	X
Mattresses and bedsprings (<i>SIC</i> 2515)	X	X	X	Women's, misses' dresses (<i>SIC</i> 2335)	X	X	X
Wood TV and radio cabinets (<i>SIC</i> 2517)	X ⁴			Women's, misses' suits, skirts, coats (<i>SIC</i> 2237)	X	X	X
Household furniture, n.e.c. (<i>SIC</i> 2519)	X	X	X	Women's and children's underwear (<i>SIC</i> 2341)	X	X	X
Wood office furniture (<i>SIC</i> 2521)	X	X	X	Children's dresses and blouses (<i>SIC</i> 2361)	X	X	X
Public building and related furniture (<i>SIC</i> 2531)	X	X	X	Children's coats and suits (<i>SIC</i> 2363)	X	X	X
Wood partitions and fixtures (<i>SIC</i> 2541)	X	X	X	Children's outerwear, n.e.c. (<i>SIC</i> 2369)	X	X	X
Metal partitions and fixtures (<i>SIC</i> 2542)	X	X	X	Robes and dressing gowns (<i>SIC</i> 2384)	X	X	X
Furniture and fixtures, n.e.c. (<i>SIC</i> 2599)	X	X	X	Curtains and draperies (<i>SIC</i> 2391)	X	X	X
Paper and paperboard products				House furnishings, n.e.c. (<i>SIC</i> 2392)	X	X	X
Paper coating and glazing (<i>SIC</i> 2641)	X	X	X	Canvas products (<i>SIC</i> 2394)	X	X	X
Envelopes (<i>SIC</i> 2642)	X	X	X	Fabricated textile products, n.e.c. (<i>SIC</i> 2399)	X	X	X
				Plastics materials and resins (<i>SIC</i> 2821)	X	X	X
				Cellulosic man-made fibers (<i>SIC</i> 2823)	X	X	X
				Other secondary	X	X	X
				Wood preserving (<i>SIC</i> 2491)	X	X	X
				Wood products, n.e.c. (<i>SIC</i> 2499)	X ¹⁵	X	X
				Others	X	X	X

¹ In 1972, SIC 2426 includes wood furniture frame manufacture which was a part of SIC 2512 in 1967 and 1963.

² In 1967 and 1963, both hardwood and softwood veneer and plywood plants were in SIC 2432.

³ In 1967 and 1963, particleboard was a part of SIC 2499.

⁴ In 1972, new SIC 2434 was established by combining wood kitchen cabinets to be built in from 2431 and other wood kitchen cabinets from 2511.

⁵ In 1967 and 1963, structural wood members, n.e.c. and prefabricated wood buildings were in SIC 2433.

⁶ In 1967 and 1963, mobile home manufacture was a part of SIC 3791.

⁷ In 1972, former SIC's 2442, 2443, and 2445 were combined in 2449.

⁸ In 1967 and 1963, wood pallets and skids manufacture was a part of 2499.

⁹ In 1967 and 1963, wood TV and radio cabinet manufacture was a part of 2511.

¹⁰ In 1972, wallpaper manufacture was a part of 2649.

¹¹ In 1972, includes paper disposable diapers which were a part of 2399 in 1967 and 1963.

¹² In 1967 and 1963, stationery product manufacture was a part of 2649.

¹³ In 1967 and 1963, warp knit fabric mills were a part of 2256.

¹⁴ In 1967 and 1963, nonwoven fabric mills were a part of 2299.

Appendix C

Selected References

Adams, Thomas C.

1974. Log prices in western Washington and northwestern Oregon, For. Serv. Res. Note PNW-235, 12 p. Pac. Northwest For. and Range Exp. Stn., Portland, Oreg.

Ball, Robert

1975. Labor and material requirements for apartment construction, *Monthly Labor Review*, 99 (1): 70-75. U.S. Dep. Labor, Bureau of Labor Stats., Washington, D.C.

Bellamy, T.R.

1974. Roundwood movement between Georgia and other States, 1971. U.S. Dep. Agric., For. Serv. Res. Note SE-199, 3 p. Southeast. For. Exp. Stn., Asheville, N.C.

1974. Pulpwood prices in the Southeast, 1973. U.S. Dep. Agric., For. Serv. Res. Note SE-205, 2 p. Southeast. For. Exp. Stn., Asheville, N.C.

Beltz, Roy C. and Daniel F. Bertelson.

1971. Timber resource statistics for Midsouth counties, 1971. U.S. Dep. Agric., For. Serv. Resour. Bull. SO-31, 27 p. South. For. Exp. Stn., New Orleans, La.

Bertelson, Daniel F.

1971. Tennessee forest industries. U.S. Dep. Agric., For. Serv. Resour. Bull. SO-30, 27 p. South. For. Exp. Stn., New Orleans, La.

1972. Alabama forest industries. U.S. Dep. Agric., For. Serv. Resour. Bull. SO-36, 29 p. South. For. Exp. Stn., New Orleans, La.

1973. Arkansas forest industries, 1971. U.S. Dep. Agric., For. Serv. Resour. Bull. SO-38, 29 p. South. For. Exp. Stn., New Orleans, La.

1973. Southern pulpwood production, 1972. U.S. Dep. Agric., For. Serv. Resour. Bull. SO-41, 25 p. South. For. Exp. Stn., New Orleans, La.

1973. Mississippi forest industries, 1972. U.S. Dep. Agric., For. Serv. Resour. Bull. SO-43, 27 p. South. For. Exp. Stn., New Orleans, La.

1975. Oklahoma forest industries, 1972. U.S. Dep. Agric., For. Serv. Resour. Bull. SO-45, 16 p. South. For. Exp. Stn., New Orleans, La.

1974. Midsouth veneer industries, 1972. U.S. Dep. Agric., For. Serv. Resour. Bull. SO-47, 11 p. South. For. Exp. Stn., New Orleans, La.

1974. Louisiana forest industries, 1973. U.S. Dep. Agric., For. Serv. Resour. Bull. SO-51, 21 p. South. For. Exp. Stn., New Orleans, La.

1975. East Texas forest industries, 1974. U.S. Dep. Agric., For. Serv. Resour. Bull. SO-57, 20 p. South. For. Exp. Stn., New Orleans, La.

Blyth, James E.

1968. Indiana sawmills receive 232 million board feet of sawlogs in 1966. U.S. Dep. Agric., For. Serv. Res. Note NC-68, 3 p. North Cent. For. Exp. Stn., St. Paul, Minn.

1968. Veneer-log production and consumption, North Central Region, 1966. U.S. Dep. Agric., For. Serv. Resour. Bull. NC-5, 6 p. North Cent. For. Exp. Stn., St. Paul, Minn.

1971. Lake States pulpwood production reaches new high in 1970. U.S. Dep. Agric., For. Serv. Res. Note NC-126, 3 p. North Cent. For. Exp. Stn., St. Paul, Minn.

1971. Pulpwood production in the North Central region, by county, 1970. For. Serv. Resour. Bull. NC-, 22 p. North Cent. For. Exp. Stn., St. Paul, Minn.

1974. Veneer-log production and receipts, North Central region, 1972. U.S. Dep. Agric., For. Serv. Resour. Bull. NC-23, 16 p. North Cent. For. Exp. Stn., St. Paul, Minn.

, and Allen H. Boelter.

1971. Primary forest products industry and industrial roundwood production, Michigan, 1969. U.S. Dep. Agric., For. Serv. Resour. Bull. NC-12, 12 p. North Cent. For. Exp. Stn., St. Paul, Minn.

, Allen H. Boelter, and Carl W. Danielson.

1975. Primary forest products industry and timber use, Michigan, 1972. U.S. Dep. Agric., For. Serv. Resour. Bull. NC-24, 45 p. North Cent. For. Exp. Stn., St. Paul, Minn.

, and William A. Farris.

1972. Iowa saw-log production and sawmill industry, 1969. U.S. Dep. Agric., For. Serv. Res. Note NC-136, 4 p. North Cent. For. Exp. Stn., St. Paul, Minn.

, and William A. Farris.

1975. Primary forest products industry and timber use, Iowa 1972. U.S. Dep. Agric., For. Serv. Resour. Bull. NC-28, 20 p. North Cent. For. Exp. Stn., St. Paul, Minn.

, and Robert Massengale.

1972. Missouri's primary forest products output and industries, 1969. U.S. Dep. Agric., For. Serv. Resour. Bull. NC-16, 15 p. North Cent. For. Exp. Stn., St. Paul, Minn.

, and Donald H. McGuire.

1974. Indiana saw log production and sawmill industry, 1971. U.S. Dep. Agric., For. Serv. Resour. Bull. NC-20, 23 p. North Cent. For. Exp. Stn., St. Paul, Minn.

, and others.

1976. Primary forest products industry and timber use, Wisconsin 1973. U.S. Dep. Agric., For. Serv. Resour. Bull. NC-31, 61 p. North Cent. For. Exp. Stn., St. Paul, Minn.

Bones, James T.

1973. The timber industries of New Jersey and Delaware. U.S. Dep. Agric., For. Serv. Resour. Bull. NE-28, 17 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

1973. Primary wood-products industries of southern New England—1971. U.S. Dep. Agric., For. Serv. Resour. Bull. NE-30, 17 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

, and David R. Dickson.
 1969. Primary wood products output in Ohio—1966. U.S. Dep. Agric., For. Serv. Resour. Bull. NE-18, 18 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

, and David R. Dickson.
 1970. The veneer industry in the Northeast. U.S. Dep. Agric., For. Serv. Resour. Bull. NE-21, 17 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

, and David R. Dickson.
 1973. Pulpwood production in the Northeast, 1972. U.S. Dep. Agric., For. Serv. Resour. Bull. NE-31, 21 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

, and David R. Dickson.
 1974. The veneer industry in the Northeast—1972. U.S. Dep. Agric., For. Serv. Resour. Bull. NE-33, 13 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

, N. Engalicher, and W. G. Gove.
 1974. The timber industries of New Hampshire and Vermont. U.S. Dep. Agric. For. Serv. Resour. Bull. NE-35, 25 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

, and Robert B. Redett.
 1976. The timber industries of Ohio. U.S. Dep. Agric., For. Serv. Resour. Bull. NE-40, 26 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

, and John K. Sherwood, Jr.
 1972. Primary wood-product industries of Pennsylvania—1969. U.S. Dep. Agric., For. Serv. Resour. Bull. NE-27, 34 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

Butts, Paul M.
 1965. Wood using industries in Georgia, a utilization report and directory, 1964. Georgia Forestry Commission.

Cassimates, Peter J.
 1969. Economics of the construction industry. Studies in Bus. Econ. No. 111, 168 p. The Conference Board, New York, N.Y.

Chase, Clarence D., Ray E. Pfeifer, and John S. Spencer, Jr.
 1970. The growing timber resource of Michigan, 1966. U.S. Dep. Agric., For. Serv. Resour. Bull. NC-9, 62 p. North Cent. For. Exp. Stn., St. Paul, Minn.

, and John K. Strickler.
 1968. Kansas woodlands. U.S. Dep. Agric., For. Serv. Resour. Bull. NC-4, 50 p. North Cent. For. Exp. Stn., St. Paul, Minn.

Choate, Grover A.
 1963. The forests of Wyoming. U.S. Dep. Agric., For. Serv. Resour. Bull. INT-2, 45 p. Intermountain For. and Range Exp. Stn., Ogden, Utah.

1965. Forests in Utah. U.S. Dep. Agric., For. Serv. Resour. Bull. INT-4, 63 p. Intermountain For. and Range Exp. Stn., Ogden, Utah.

, and John S. Spencer, Jr.
 1969. Forests in South Dakota. U.S. Dep. Agric. For. Serv. Resour. Bull. INT-8, 40 p. Intermountain For. and Range Exp. Stn., Ogden, Utah.

Darr, David R.
 1975. Softwood log exports and the value and employment issues. U.S. Dep. Agric., For. Serv. Res. Pap. PNW-200, 13 p. Pac. Northwest For. and Range Exp. Stn., Portland, Oreg.

Douglas, Bernard S.
 1965. Special Forest products, 1964 harvesting report, Oregon and Washington, U.S. Dep. Agric., For. Serv. Pac. Northwest Region, Portland, Oreg.

Duerr, W. A.
 1963. Professional forestry employment: the context and the issue. *J. Forestry*, 71 (8): 491-93.

Duke, John and C. Huffstutler.
 1977. Productivity in sawmills increases as labor input declines substantially. *Monthly Labor Review*, 100 (4): 33-37. U.S. Dep. Labor, Bureau of Labor Stats., Washington, D.C.

Essex, Burton L., and David H. Gansner.
 1965. Illinois timber resources. U.S. Dep. Agric., For. Serv. Resour. Bull. LS-3, 56 p. Lake States For. Exp. Stn., St. Paul, Minn.

Executive Office of the President, Bureau of the Budget.
 1957. Standard industrial classification manual. 433 p. U.S. Gov. Print. Off., Washington, D.C.

,
 1958. Supplement to the 1957 standard industrial classification manual. 25 p. U.S. Gov. Print. Off., Washington, D.C.

,
 1967. Standard industrial classification manual. 615 p. U.S. Gov. Print. Off., Washington, D.C.

Executive Office of the President, Council of Economic Advisors.
 1978. Economic report of the President. 381 p. U.S. Gov. Print. Off., Washington, D.C.

Executive Office of the President, Office of Management and Budget.
 1972. Standard industrial classification manual. 649 p. U.S. Gov. Print. Off., Washington, D.C.

Farris, Mary R.
 1978. The veneer and plywood industry: above average productivity gains. *Monthly Labor Review*, 101 (9): 26-30. U.S. Dep. Labor, Bureau of Labor Stats., Washington, D.C.

Ferguson, Roland H.
 1964. The timber resources of West Virginia. U.S. Dep. Agric., For. Serv. Resour. Bull. NE-2, 121 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

,
 1967. The timber resources of Maryland. U.S. Dep. Agric., For. Serv. Resour. Bull. NE-7, 93 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

,
 1968. The timber resources of Pennsylvania. U.S. Dep. Agric., For. Serv. Resour. Bull. NE-8, 147 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

, and Victor S. Jensen.

1963. The timber resources of New Hampshire. U.S. Dep. Agric., For. Serv. Resour. Bull. NE-1, 46 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

, and Neal P. Kingsley.

1972. The timber resources of Maine. U.S. Dep. Agric., For. Serv. Resour. Bull. NE-26, 129 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

, and Carl E. Mayer.

1970. The timber resources of New York. U.S. Dep. Agric., For. Serv. Resour. Bull. NE-20, 193 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

, and Carl E. Mayer.

1973. The timber resources of Delaware. U.S. Dep. Agric., For. Serv. Resour. Bull. NE-32, 42 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

Fobes, E. W. and R. W. Row.

1968. Marketing practices of Minnesota sawmills. U.S. Dep. Agric., For. Serv. Res. Note NC-55, 3 p. North Cent. For. Exp. Stn., St. Paul, Minn.

Gansner, David A.

1965. Missouri's forests. U.S. Dep. Agric., For. Serv. Resource Bull. CS-2, 53 p. Cent. States For. Exp. Stn., Columbus, Ohio.

.
1968. The timber resources of Kentucky. U.S. Dep. Agric., For. Serv. Resour. Bull. NE-9, 97 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

Gill, Thomas G.

1965. Wood used in manufacturing industries. U.S. Dep. Agric. For. Serv. Stat. Bull. 353, 121 p. Div. For. Econ. Mkt. Res., For. Ser., Washington, D.C.

, and Robert B. Phelps.

1969. Wood used in manufacturing industries, 1965. U.S. Dep. Agric., For. Serv. Stat. Bull. 440, 101 p. Div. For. Econ. Mkt. Res., For Ser., Washington, D.C.

Ginnaty, Thomas P., Jr.

1972. Veneer-log production and receipts, North Central Region, 1970. For. Serv. Resour. Bull. NC-14, 8 p. North Cent. For. Exp. Stn., St. Paul, Minn.

Green, Alan W., and Theodore S. Setzer.

1974. The Rocky Mountain timber situation, 1970. U.S. Dep. Agric., For. Serv. Resour. Bull. INT-10, 78 p. Intermountain For. and Range Exp. Stn., Ogden, Utah.

Gregory, G. Robinson.

1972. Forest resource economics. 548 p. The Ronald Press Co., New York, N.Y.

Haines, William H. B.

1968. Pulwood prices in the Southeast, 1962-1967. U.S. Dep. Agric., For. Serv. Res. Note. SE-92, 2 p. Southeast. For. Exp. Stn., Asheville, N.C.

Hair, Dwight.

1963. The economic importance of timber. U.S. Dep. Agric., For. Serv. Misc. Pub. 941, 91 p. U.S. Gov. Print. Off., Washington, D.C.

, and Alice H. Ulrich.

1964. The demand and price situation for forest products—1964. U.S. Dep. Agric., Misc. Pub. 983, 58 p. U.S. Dep. Agric., For. Serv., Washington, D.C.

Henneberger, J. E.

1978. Productivity growth below average in the household furniture industry, *Monthly Labor Review*, 101 (11): 23-29. U.S. Dep. Labor, Bureau of Labor Stats., Washington, D.C.

Herrick, Owen W.

1967. A look at Kentucky's lumber industry. U.S. Dep. Agric., For. Serv. Res. Pap. NE-63, 11 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

Howard, James O.

1974. California forestry industry wood consumption and characteristics, 1972. U.S. Dep. Agric., For. Serv. Resour. Bull. PNW-52, 91 p. Pac. Northwest For. and Range Exp. Stn., Portland, Oreg.

Hutchins, Cecil H., Jr.

1977. Pulwood prices in the Southeast, 1976, and 5-year trend. U.S. Dep. Agric., For. Serv. Res. Note SE-253, 4 p. Southeast. For. Exp. Stn., Asheville, N.C.

Illinois Cooperative Crop Reporting Service.

—. Timber prices. Illinois Cooperative Crop Reporting Service. Springfield, Ill. (semiannual).

Hutchison, O. Keith.

1968. Alaska's forest resource. U.S. Dep. Agric., For. Serv. Resour. Bull. PNW-19, 74 p. Pac. Northwest For. and Range Exp. Stn., Inst. North. For., Juneau, Ak.

Interstate Commerce Commission.

—. Transport Statistics in the United States. Interstate Commerce Commission, Bureau of Accounts. Washington, D.C. (annual).

—. Freight commodity statistics, class 1 railroads. Interstate Commerce Commission, Bureau of Accounts. Washington, D.C. (annual).

—. Freight commodity statistics, motor carriers of property. Interstate Commerce Commission, Bureau of Accounts, Washington, D.C. (annual).

Irland, Lloyd C.

1975. The South's forest industries, a statistical profile. 28 p. Southern For. Prod. Asso., New Orleans, La.

, ed.

1975. Manpower-forest industry's key resource. Bull. No. 86, 242 p. Yale Univ. Sch. of For. and Environ. Studies, Yale Univ., New Haven, Conn.

Kaiser, H. F., Jr.

1968. Interindustry model of the U.S. forest products economy. *For. Prod. J.* 18 (11): 15-18.

, and George F. Dutrow.

1971. Structure and changes in the southern forest economy, 1958-1967. U.S. Dep. Agric., For. Serv. Res. Pap. SO-71, 18 p. South. For. Exp. Stn., New Orleans, La.

Kentucky University, Forestry Department.

—. Kentucky forest utilization survey. University of Kentucky, College of Agriculture and Kentucky State Div. of Forestry, Lexington, Ky. (annual)

Kingsley, Neal P.

1971. Pulpwood in the Northeast: past, present, and future. U.S. Dep. Agric., For. Serv. Resour. Bull. NE-23, 21 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

, and Carl E. Mayer.

1970. The timber resources of Ohio. U.S. Dep. Agric., For. Serv. Resour. Bull. NE-19, 137 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

Knight, Herbert A. and Joe P. McClure.

1966. North Carolina's timber. U.S. Dep. Agric., For. Serv. Resour. Bull. SE-5, 47 p. Southeast. For. Exp. Stn., Asheville, N.C.

, and Joe P. McClure.

1967. Virginia's timber. U.S. Dep. Agric., For. Serv. Resour. Bull. SE-8, 47 p. Southeast. For. Exp. Stn., Asheville, N.C.

, and Joe P. McClure.

1969. South Carolina's timber. U.S. Dep. Agric., For. Serv. Resour. Bull. SE-13, 44 p. Southeast. For. Exp. Stn., Asheville, N.C.

, and Joe P. McClure

1971. Florida's timber. U.S. Dep. Agric., For. Serv. Resour. Bull. SE-20, 48 p. Southeast. For. Exp. Stn., Asheville, N.C.

, and Joe P. McClure

1974. Georgia's timber, 1972. U.S. Dep. Agric., For. Serv. Resour. Bull. SE-27, 48 p. Southeast. For. Exp. Stn., Asheville, N.C.

, and Joe P. McClure.

1975. North Carolina's timber, 1974. U.S. Dep. Agric., For. Serv. Resour. Bull. SE-33, 52 p. Southeast. For. Exp. Stn., Asheville, N.C.

Knutson, Robert G.

1967. Lake States veneer log production shows increase in 1965. U.S. Dep. Agric., For. Serv. Res. Note NC-26, 3 p. North Cent. For. Exp. Stn., St. Paul, Minn.

Lane, R. D.

1964. Consumption and harvest of veneer logs in the Central States —1963. U.S. Dep. Agric., For. Serv. Res. Note CS-26, 8 p. Cent. States For. Exp. Stn., Columbus, Ohio.

Lloyd, J. D., Jr.

1973. 1972 Oregon timber harvest. U.S. Dep. Agric., For. Serv. Resour. Bull. PNW-49, 1 p. Pac. Northwest For. and Range Exp. Stn., Portland, Oreg.

Louisiana Department of Agriculture, State Market Commission.

—. Louisiana timber products—quarterly market report. State Market Commission and U.S. Dep. Agric., Baton Rouge, La. (quarterly).

Maki, Wilbur, and Dennis L. Schweitzer.

1973. Importance of timber-based employment to the Douglas-fir region, 1959 to 1971. U.S. Dep. Agric., For. Serv. Res. Note PNW-196, 12 p. Pac. Northwest For. and Range Exp. Stn., Portland, Oreg.

Miller, Robert L., and Grover A. Choate.

1964. The forest resource of Colorado. U.S. Dep. Agric., For. Serv. Resour. Bull. INT-3, 55 p. Intermountain For. and Range Exp. Stn., Ogden, Utah.

Murphy, Paul A.

1973. Alabama forests: trends and prospects. U.S. Dep. Agric., For. Serv. Resour. Bull. SO-42, 36 p. Southern For. Exp. Stn., New Orleans, La.

—. 1975. Louisiana forests: status and outlook. U.S. Dep. Agric., For. Serv. Resour. Bull. SO-53, 31 p. Southern For. Exp. Stn., New Orleans, La.

Nelson, Robert E., and Philip R. Wheeler.

1963. Forest resources of Hawaii. 48 p. For. Div., Dep. of Land and Nat. Resources, State of Hawaii; U.S. Dep. Agric., For. Serv., Pac. Northwest For. and Range Exp. Stn., Portland, Oreg.

New Hampshire University, Cooperative Extension Service.

—. New Hampshire forest market report. University of New Hampshire, Durham, N.H. (annual).

Ohio Department of Agriculture, Division Markets.

—. Ohio timber prices. U.S. Dep. Agric., Stat. Rep. Serv., Columbus, Ohio (quarterly).

Phelps, Robert B.

1975. The demand and price situation for forest products, 1974-75. U.S. Dep. Agric., Misc. Pub. 1315, 85 p. U.S. Dep. Agric., For. Serv., Washington, D.C.

Porterfield, Richard L.

1975. A profile of forestry employment in Montana. U.S. Dep. Agric., For. Serv. Res. Pap. INT-172, 24 p. Intermountain For. and Range Exp. Stn., Ogden, Utah.

Richardson, Harry W.

1972. Input-output and regional economics. 294 p. Weidenfeld and Nicolson, London, Eng.

Ruderman, Florence K.

—. Production, prices, employment and trade in Northwest forest industries. U.S. Dep. Agric., For. Serv. Pac. Northwest For. and Range Exp. Stn., Portland, Oreg. (quarterly).

Samuelson, Paul A.

1973. Economics. 9th ed., 917 p. McGraw-Hill Book Co., New York, N.Y.

Schuldt, John P., and James O. Howard.

1974. Oregon forest industries—1972—Wood consumption and mill characteristic. Spec. Rep. 427, 113 p. For. Ext., Oreg. State Univ. Ext. Serv., Corvallis, and U.S. Dep. Agric., For. Serv., Pac. Northwest For. and Range Exp. Stn., Portland, Oreg.

Schuster, Ervin G., E. B. Godfrey, and W. D. Koss.
 1975. Timber cut, employment and wages: Multipliers for Idaho's timber using industry. Tech. Rep. No. 1, 13 p. College of For., Wildlife, and Range Sci., Univ. Idaho, Moscow, Idaho.

Schweitzer, Dennis L., Robert E. Benson, and Richard J. McConnen.
 1975. A descriptive analysis of Montana's forest resources. U.S. Dep. Agric., For. Serv. Resource Bull. INT-11, 100 p. Intermountain For. and Range Exp. Stn., Ogden, Utah.

Setzer, Theodore S.
 1971. Estimates of timber products output and plant residues, Montana, 1969. U.S. Dep. Agric., For. Serv. Res. Note INT-133, 4 p. Intermountain For. and Range Exp. Stn., Ogden, Utah.

1971. Estimates of timber products output and plant residues, New Mexico, 1969. U.S. Dep. Agric., For. Serv. Res. Note INT-134, 4 p. Intermountain For. and Range Exp. Stn., Ogden, Utah.

1971. Estimates of timber products output and plant residues Utah and Nevada, 1969. U.S. Dep. Agric., For. Serv. Res. Note INT-135, 4 p. Intermountain For. and Range Exp. Stn., Ogden, Utah.

1971. Estimates of timber products output and plant residues, Wyoming and western South Dakota, 1969. U.S. Dep. Agric., For. Serv. Res. Note INT-136, 6 p. Intermountain For. and Range Exp. Stn., Ogden, Utah.

, and Alvin K. Wilson.
 1970. Timber products in the Rocky Mountain Region, 1966. U.S. Dep. Agric., For. Serv. Resour. Bull. INT-9, 89 p. Intermountain For. and Range Exp. Stn., Ogden, Utah.

Sherman, Roger L.
 1976. Trends in forest product prices. *Forest Farmer* (manual edition). Forest Farmers Assoc., Atlanta, Ga.

Sloan, Roger P., and Nicolas Engalichev.
 1966. New Hampshire forest market report. Ext. circular, 59 p. Ext. Serv., Univ. New Hampshire, Durham, N.H.

Smith, Richard C., and Donald R. Gedney.
 1965. Manpower use in the wood-products industries of Oregon and Washington, 1950-63. U.S. Dep. Agric., For. Serv. Res. Pap. PNW-28, 48 p. Pac. Northwest For. and Range Exp. Stn., Portland, Oreg.

Spencer, John S. Jr.
 1969. Indiana's timber. U.S. Dep. Agric., For. Serv. Resource Bull. NC-7, 61 p. North Cent. For. Exp. Stn., St. Paul, Minn.

, and Burton L. Essex.
 1976. Timber in Missouri, 1972. U.S. Dep. Agric., For. Serv. Resource Bull. NC-30, 108 p. North Central For. Exp. Stn., St. Paul, Minn.

, and Harry W. Thorne.
 1972. Wisconsin's 1968 timber resource—a prospective. U.S. Dep. Agric., For. Serv. Resource Bull. NC-15, 80 p. North Central For. Exp. Stn., St. Paul, Minn.

Sternitzke, Herbert S.
 1971. Midsouth veneer log production. U.S. Dep. Agric., For. Serv. Resource Bull. SO-25, 8 p. Southern For. Exp. Stn., New Orleans, La.

Textile Economics Bureau, Inc.
 _____. Textile Organon. Textile Economics Bureau, Inc. New York, N.Y. (monthly)

Theoe, D. R.
 1973. Employment summary for forestry graduates, class of 1972. *J. Forestry* 71 (11): 710-11.

U.S. Department of Agriculture, Cooperative State Research Service.
 _____. Professional workers in State Agricultural Experiment Stations and other cooperative State institutions. U.S. Dep. Agric., Ag. Handbook Washington, D.C. (periodic)

U.S. Department of Agriculture, Forest Service.
 1964. 1963 Forest fire statistics. 28 p. Div. Coop. For. Fire Control, For. Serv., Washington, D.C.

1968. 1967 Forest fire statistics. 47 p. Div. Coop. For. Fire Control, For. Serv., Washington, D.C.

1973. 1972 Wildfire statistics. Div. Coop. For. Fire Control, For. Serv., Washington, D.C. 57 p.

1965. Timber trends in the United States. For. Resour. Rep. 17, 235 p. U.S. Gov. Print. Off., Washington, D.C.

1974. The outlook for timber in the United States. For. Resour. Rep. 20, 374 p. U.S. Gov. Print. Off., Washington, D.C.

1964. Report of the Chief of the Forest Service, 1963. For. Serv., Washington, D.C.

1968. Report of the Chief of the Forest Service, 1967. 56 p. For. Serv., Washington, D.C.

1974. Report of the Chief of the Forest Service, 1972-73. 52 p. For. Serv., Washington, D.C.

_____. Stumpage prices for sawtimber sold from National Forests, by selected species and region. For. Res. Econ. Res. Staff., Forest Service, Washington, D.C. (quarterly)

1964. Veneer log production and receipts in the eastern United States, by State and species, 1963. U.S. Dep. Agric., For. Serv. Res. Note WO-6, 5 p. Div. For. Econ. Mkt. Res., Washington, D.C.

U.S. Department of Commerce, Bureau of the Census.
 1967. Census of business, 1963. Vol. I, Retail trade—summary statistics. U.S. Gov. Print. Off., Washington, D.C.

1967. Census of Business, 1963. Vol. IV, Wholesale trade—summary statistics. U.S. Gov. Print. Off., Washington, D.C.

1971. Census of Business, 1967. Vol. I, Retail trade—subject reports. U.S. Gov. Print. Off., Washington, D.C.

1971. Census of Business, 1967. Vol. III, Wholesale trade—subject reports. U.S. Gov. Print. Off., Washington, D.C.

1971. Census of construction industries, 1967. Vol. I, Industry statistics and special reports. U.S. Gov. Print. Off., Washington, D.C.

1976. Census of construction industries, 1972. Vol. I, Industry and special statistics. U.S. Gov. Print. Off., Washington, D.C.

1966. Census of manufactures, 1963. Vol. II, pts. 1 and 2, Industry statistics. U.S. Gov. Print. Off., Washington, D.C.

1971. Census of manufactures, 1967. Vol. II, pts. 1, 2, and 3, Industry statistics. U.S. Gov. Print. Off., Washington, D.C.

1976. Census of manufactures, 1972. Vol. II, pts. 1, 2, and 3. Industry statistics. U.S. Gov. Print. Off., Washington, D.C.

1963. Census of population, 1960. Occupational characteristics. PC(2)-7A, 551 p. U.S. Gov. Print. Off., Washington, D.C.

1963. Census of population, 1960. Occupation by industry. PC(2)-7C, 163 p. U.S. Gov. Print. Off., Washington, D.C.

1967. Census of population, 1960. Industrial characteristics. PC(2)-7F, 216 p. U.S. Gov. Print. Off., Washington, D.C.

1973. Census of population, 1970. Occupational characteristics, PC(2)-7A, 845 p. U.S. Gov. Print. Off., Washington, D.C.

1973. Census of population, 1970. Industrial characteristics, PC(2)-7B, 410 p. U.S. Gov. Print. Off., Washington, D.C.

1972. Census of population, 1970. Occupation by industry, PC(2)-7C, 531 p. U.S. Gov. Print. Off., Washington, D.C.

1976. Census of retail trade, 1972. Vol. I. Summary and subject reports. U.S. Gov. Print. Off., Washington, D.C.

1976. Census of wholesale trade, 1972. Vol. I. Summary and subject reports. U.S. Gov. Print. Off., Washington, D.C.

_____. Housing starts. Construct. Reps. Ser. C20. U.S. Gov. Print. Off., Washington, D.C. (monthly).

_____. Hardwood plywood. Curr. Indus. Reps. Ser. MA-24F. Industry Div., Bureau of the Census, Washington, D.C. (annual).

_____. Lumber production and mill stocks. Curr. Indus. Reps. Ser. MA-24T. Industry Div., Bureau of the Census, Washington, D.C. (annual).

_____. Pulp, paper, and board. Curr. Indus. Reps. Ser. M-26A. Industry Div., Bureau of the Census, Washington, D.C. (monthly).

_____. Residential alterations and repairs. Constr. Reps. Ser. C50. U.S. Gov. Print. Off., Washington, D.C. (quarterly).

_____. Softwood plywood. Curr. Ind. Repr. Ser. MA-24H. Industry Div., Bureau of the Census, Washington, D.C. (annual)

_____. Value of new construction put in place. Constr. Reps. Ser. C30. U.S. Gov. Print. Off., Washington, D.C. (monthly).

U.S. Department of Commerce; Bureau of Economic Analysis.

1969. Input-output structure of the U.S. economy: 1963. Vols 1-3. U.S. Gov. Print. Off., Washington, D.C.

1974. Input-output structure of the U.S. economy: 1967. Vols 1-3. U.S. Gov. Print. Off., Washington, D.C.

1974. Input-output structure of the U.S. economy: 1967. *Survey of Current Business*, 54(2): 24-56. U.S. Gov. Print. Off., Washington, D.C.

1977. The income and product accounts of the United States, 1929-74, statistical tables. A supplement to the survey of current business. 360 p. U.S. Gov. Print. Off., Washington, D.C.

U.S. Department of Labor, Bureau of Labor Statistics

_____. Employment and earnings. BLS Bull. Ser. Bureau of Labor Statistics, U.S. Dept. Labor., Washington, D.C. (annual).

1964. Labor and material requirements for civil works construction by the Corps of Engineers. BLS Bull. 1390, 28 p. Washington, D.C.

1964. Labor and material requirements for public housing construction. BLS Bull. 1402, 42 p. Washington, D.C.

1964. Labor and material requirements for private one-family house construction. BLS Bull. 1404, 37 p. Washington, D.C.

1965. Labor and material requirements for college housing construction. BLS Bull. 1441, 34 p. Washington, D.C.

1966. Labor and material requirements for sewer works construction. BLS Bull. 1441, 34 p. Washington, D.C.

1966. Labor and material requirements for construction of Federally-aided highways, 1958, 1961, and 1964. BLS Rep. 299, 17 p. Washington, D.C.

1968. Labor and material requirements for school construction. BLS Bull. 1586, 23 p. Washington, D.C.

1970. Seasonality and manpower in construction. BLS Bull. 1642, 148 p. Washington, D.C.

1971. Labor and material requirements for hospital and nursing home construction. BLS Bull. 1691, 50 p. Washington, D.C.

1972. Labor and material requirements for construction of private single-family houses. BLS Bull. 1755, 30 p. Washington, D.C.

1977. Productivity indexes for selected industries, 1977 ed. BLS Bull. 1983, 250 p. Washington, D.C.

Van Hooser, Dwane D.

1973. Midcycle evaluation of Mississippi timber resources. U.S. Dep. Agric., For. Serv. Resour. Bull. SO-44, 19 p. Southern For. Exp. Stn., New Orleans, La.

Van Sickle, Charles C.

1967. East Oklahoma's timber harvest, 1965. U.S. Dep. Agric. For. Serv. Res. Note SO-57, 6 p. Southern For. Exp. Stn., New Orleans, La.

1970. Arkansas forest resource patterns. U.S. Dep. Agric., For. Serv. Resource Bull. SO-24, 34 p. Southern For. Exp. Stn., New Orleans, La.

, and Dwane D. Van Hooser.

1969. Forest resources of Mississippi. U.S. Dep. Agric., For. Serv. Resource Bull. SO-17, 34 p. Southern For. Exp. Stn., New Orleans, La.

Walker, L. C. and D. R. Theoe.

1972. Forestry employment by the States. *J. Forestry* 70 (12): 771-2.

, and D. R. Theoe.

1973. Forester employment in academia. *J. Forestry* 71 (8): 56-7.

, D. R. Theoe, and S. R. Hopkins.

1972. Forester employment in the Federal government; a committee progress report. *J. Forestry* 70 (11): 716-21.

Wall, Brian R.

1972. Log production in Washington and Oregon—an historical prospective. U.S. Dep. Agric., For. Serv. Resour. Bull. PNW-42, 89 p. Pac. Northwest For. and Range Exp. Stn., Portland, Oreg.

, and Daniel D. Oswald.

1975. A technique and relationships for projections of employment in the Pacific Coast forest products industries. U.S. Dep. Agric., For. Serv. Res. Pap. PNW-189, 49 p. Pac. Northwest For. and Range Exp. Stn., Portland, Oreg.

Welch, Richard L.

1971. Veneer log production and receipts in the Southeast, 1969. U.S. Dep. Agric., For. Serv. Res. Note SE-158, 2 p. Southeastern For. Exp. Stn., Asheville, N.C.

, and Thomas R. Bellamy.

1976. Changes in output of industrial timber products in Georgia, 1971-74. U.S. Dep. Agric., For. Serv. Resour. Bull. SE-36, 28 p. Southeastern For. Exp. Stn., Asheville, N.C.

, and Thomas R. Bellamy.

1977. Changes in output of industrial timber products in Florida, 1969-1975. U.S. Dep. Agric., For. Serv. Resour. Bull. SE-40, 23 p. Southeastern For. Exp. Stn., Asheville, N.C.

Wilson, Alvin K., and John S. Spencer, Jr.

1967. Timber resource and industries in the Rocky Mountain States. U.S. Dep. Agric., For. Serv. Resource Bull. INT-7, 6 p. Intermountain For. and Range Exp. Stn., Ogden, Utah.

Wisconsin University, Forestry Department.

, Wisconsin forest products price review. Coop. Ext. Program of Univ. Ext. and U.S. Dep. Agric., Madison, Wisc. (semi-annual).

Wolf, Charles H. and J. W. Nolly.

1977. Changes in the logging labor force. U.S. Dep. Agr., For. Serv. Res. Rep. NE-359, 7 p. Northeast. For. Exp. Stn., Upper Darby, Pa.

